PASSUMPSIC RIVER PADDLING GUIDE

The Passumpsic River

The cold, rushing waters of Vermont's remote Northeast Kingdom tumble down from surrounding mountain peaks into the lovely Passumpsic River.

The Passumpsic - an Abenaki Indian word meaning "clear, sandy bottom" - has regained its reputation as an ideal river for recreation.

This book provides a guide to the jewel of the Kingdom, and includes history, geology, what to see and what to do, as well as detailed maps and a guide to paddling the Passumpsic River, its East and West branches, and the Moose River.

PASSUMPSIC RIVER PADDLING GUIDE

Acknowledgments

The original edition of the *Passumpsic River Canoeing and Recreation Guide* appeared in 1996, published by the Central Vermont Public Service Corporation, and edited by Alan Boye with a variety of content by several contributors in the Passumpsic Valley. A revised edition in 1999, edited by Jack Crowther, maintained the original content together with historical perspectives, prepared by Hugh Henry, focusing on the seven hydroelectric generating stations along the river's 23-mile mainstem.

Similarly, this 2017 edition, published by Green Mountain Power Corporation, retains most of the 1999 content while adding new features, including historic post card images. Detailed topographic maps, prepared by Noah Pollock of the Vermont River Conservancy, have replaced the original sketch maps. The descriptive coverage of the Passumpsic now extends upstream along both its East and West branches and the tributary Moose River, with the text by Luke O'Brien of the Northwoods Stewardship Center.

This guide is intended to provide general information about paddling along the Passumpsic River and to help the user know the history and understand the geography and water flows. It is important to remember that the river and area around it are always changing. Green Mountain Power and other contributors to this guide do not have any liability for how the information is used. All paddling and other activities along the Passumpsic River are taken at your own risk, and it is each person's responsibility to understand and prepare for potentially challenging conditions encountered on and along the river. Safety first!

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Cover Post Card Image: Riverside Canoe Club upstream of Concord Avenue bridge, St. Johnsbury, c.1910. Courtesy of St. Johnsbury (VT) History and Heritage Center.

TABLE OF CONTENTS

1.0 THE RIVER 2
INTRODUCTION TO THE RIVER 2
HISTORY OF THE RIVER 4
HYDROELECTRIC DEVELOPMENT ON THE RIVER 7

2.0 GUIDES 9
REGIONAL RECREATION OPPORTUNITIES 9
GEOLOGY OF THE WATERSHED 12
COMMON VEGETATION OF THE WATERSHED 14
AQUATIC INVASIVE SPECIES IN VERMONT 16

3.0 PADDLING SAFETY, GEAR AND ETHICS 17
PADDLING SAFETY CONSIDERATIONS 17
PADDLING GEAR 18
WHITEWATER BOATING INFORMATION 19
PADDLING AND LAND USE ETHICS 19

4.0 MAPS AND PADDLING GUIDE 20
MAP 1 – EAST BRANCH - LOST NATION TO BRIDGE #15 23
MAP 2 – EAST BRANCH - BRIDGE #15 TO EAST BURKE 25
MAP 3 – EAST BRANCH - EAST BURKE TO CONFLUENCE 28
MAP 4 – CONFLUENCE TO VAIL HYDRO DAM 31
MAP 5 – VAIL HYDRO DAM TO ROUTE 5 BRIDGE 35
MAP 6 – ROUTE 5 BRIDGE TO ARNOLD FALLS HYDRO DAM 40
MAP 7 – ARNOLD FALLS HYDRO DAM TO PASSUMPSIC HYDRO DAM 45
MAP 8 – PASSUMPSIC HYDRO DAM TO EAST BARNET HYDRO DAM 50
MAP 9 – EAST BARNET HYDRO DAM TO BARNET-MONROE BRIDGE ACCESS (CONNECTICUT RIVER) 55
MAP 10 – WEST BRANCH - WEST BURKE TO BUGBEE CROSSING 58
MAP 11 – MOOSE RIVER - GALLUP MILLS TO VICTORY 61
MAP 12 – MOOSE RIVER – VICTORY TO ST. JOHNSBURY 63

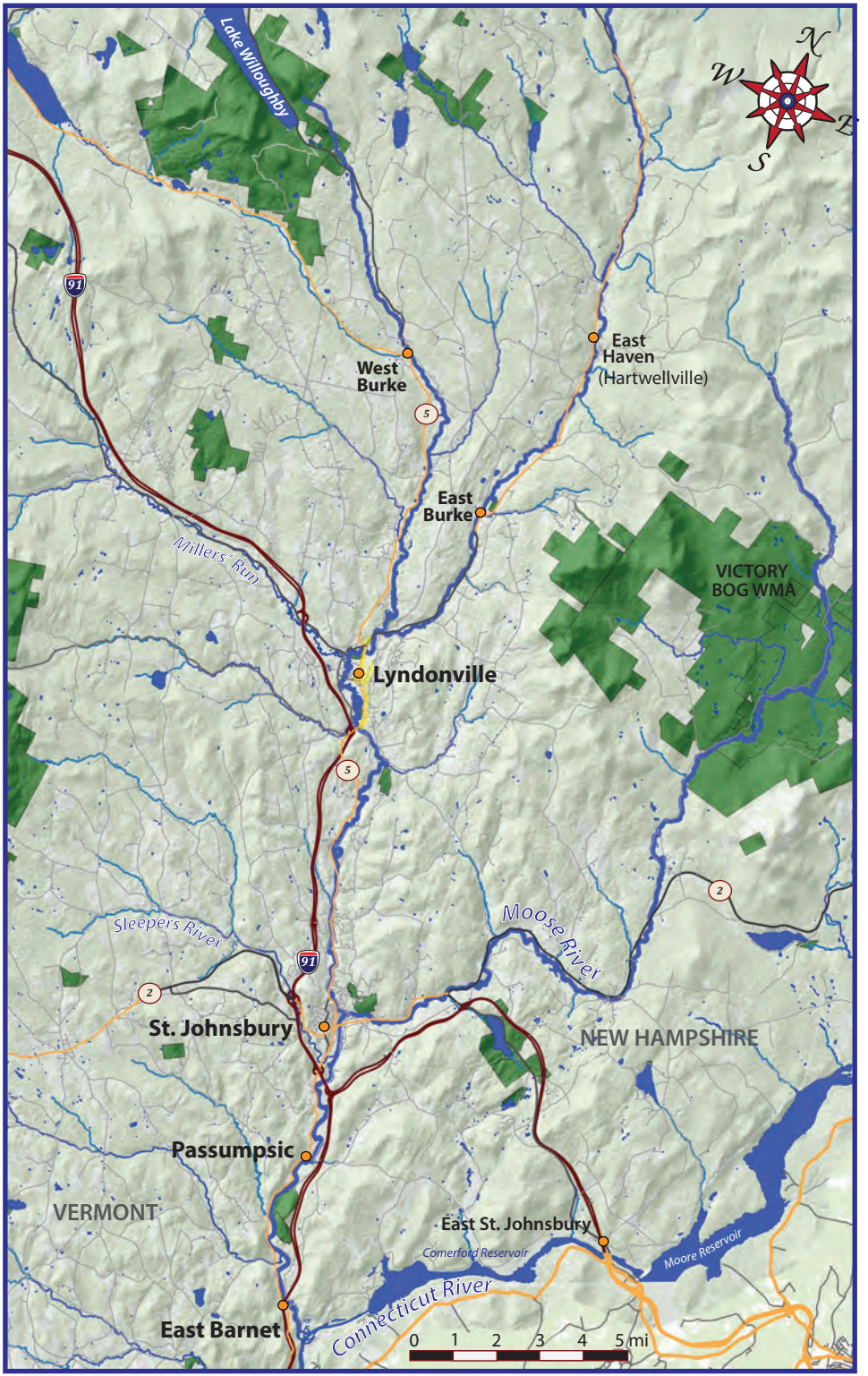
5.0 SOURCES 64

LIST OF FIGURES

FIGURE 1	OVERVIEW MAP PASSUMPSIC RIVER	1
FIGURE 2	POISONOUS PLANT SPECIES	15
FIGURE 3	PASSUMPSIC RIVER REFERENCE MAP	21
FIGURE 4	MAP 1 – EAST BRANCH - LOST NATION TO BRIDGE #15	22
FIGURE 5	MAP 2 – EAST BRANCH – BRIDGE #15 TO EAST BURKE	24
FIGURE 6	MAP 3 – EAST BRANCH - EAST BURKE TO CONFLUENCE	27
FIGURE 7	MAP 4 – CONFLUENCE TO VAIL HYDRO DAM	30
FIGURE 8	MAP 5 – VAIL HYDRO DAM TO ROUTE 5 BRIDGE	34
FIGURE 9	PIERCE MILLS DAM PORTAGE ROUTE	37
FIGURE 10	MAP 6 – ROUTE 5 BRIDGE TO ARNOLD FALLS HYDRO DAM	39
FIGURE 11	ARNOLD FALLS DAM PORTAGE ROUTE	42
FIGURE 12	MAP 7 – ARNOLD FALLS HYDRO DAM TO PASSUMPSIC HYDRO DAM	44
FIGURE 13	PASSUMPSIC DAM PORTAGE ROUTE	48
FIGURE 14	MAP 8 – PASSUMPSIC HYDRO DAM TO EAST BARNET HYDRO DAM	49
FIGURE 15	EAST BARNET DAM PORTAGE ROUTE	52
FIGURE 16	MAP 9 – EAST BARNET HYDRO DAM TO BARNET-MONROE BRIDGE ACCESS (CONNECTICUT RIVER)	54
FIGURE 17	MAP 10 – WEST BRANCH - WEST BURKE TO BUGBEE CROSSING	57
FIGURE 18	MOOSE RIVER REFERENCE MAP	59
FIGURE 19	MAP 11 – MOOSE RIVER - GALLUP MILLS TO VICTORY	60
FIGURE 20	MAP 12 – MOOSE RIVER – VICTORY TO ST. JOHNSBURY	62

LIST OF PHOTOS

PHOTO 1	PADDLING SAFETY REVIEW AT PASSUMPSIC STATION	26
PHOTO 2	TOWN OF LYNDON BOAT ACCESS	32
PHOTO 3	SPEEDWELL FARMS POWER PLANT AT LITTLE FALLS, C. 1910	33
PHOTO 4	WILDER PULP MILL WITH ELECTRIC LIGHT STATION AT GREAT FALLS, C. 1900	36
PHOTO 5	CLASS III LEDGES BELOW PIERCE ROAD BRIDGE	38
PHOTO 6	DAM AT TWIN STATE STATION NO. 1, ST. JOHNSBURY CENTER, C. 1920	41
PHOTO 7	ST. JOHNSBURY MUNICIPAL WATER PUMPING STATION AT ARNOLD FALLS, C. 1900	42
PHOTO 8	FRED MOLD PARK, ST. JOHNSBURY	43
PHOTO 9	DAM AT TWIN STATE STATION NO. 2, BAY STREET, C. 1920	45
PHOTO 10	BELKNAP SHOP WITH ST. JOHNSBURY ELECTRIC LIGHT GENERATING STATION, C.1900	47
PHOTO 11	RAPIDS BELOW PASSUMPSIC STATION	50
PHOTO 12	EAST BARNET ACCESS	52
PHOTO 13	FALLS AT EAST BARNET WITH ROY BROTHERS CROQUET FACTORY ON RIGHT, C. 1910	53
PHOTO 14	RAPIDS DOWNSTREAM OF EAST BARNET DAM	55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Moore Reservoir
Connecticut River
East Barnet
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1.0 THE RIVER

INTRODUCTION TO THE RIVER

A medium-sized river in Vermont, the Passumpsic River extends about 34 miles in north-south length. Most of its course passes through the towns of Burke, Lyndon, St. Johnsbury, Waterford, and Barnet in Caledonia County. However, both the East and West branches have their headwaters in towns in adjoining counties, Brighton in Essex and Westmore in Orleans, respectively. At the south end, the Passumpsic's confluence with the Connecticut River is in the town of Monroe, New Hampshire, owing to the position of the interstate boundary.

The Passumpsic descends about 700 feet in elevation along its route through generally hilly terrain. Its watershed encompasses about 507 square miles and receives about 35 inches of precipitation annually. Numerous smaller rivers and brooks form tributaries along both the east and west sides of the Passumpsic basin, contributing substantial volumes of water.

The discharge of water in the Passumpsic varies greatly from season to season during the year. A gaging station belonging to the U. S. Geological Survey (No. 01135500) has existed since October 1928 at a point about one mile downstream from the dam at Passumpsic village. The recorded monthly average discharge during the years 1929-September 2016 ranged from 355 cubic feet per second (cfs) in September to 2,260 cfs in April. The months of July, August, and September typically provide both lower water levels (446, 368, and 355 cfs, respectively) and warmer water temperatures desirable for safer paddling on the river.

The variability of discharge in the Passumpsic is more obvious in the minimum and maximum flows by month, declining to 98.8 cfs in September 1948 and rising to 4,013 cfs in March 1936. The peak flood flow recorded during the period of 1929 to 2016, however, came during the summer, on July 1, 1973, when the river reached 18,200 cfs and a gage height of 23.49 feet.

SAFETY

Boaters should carefully assess the volume of water and obstacles in the Passumpsic River before deciding to paddle any reach of it. The river offers much less difficulty at lower water levels, especially in the vicinity of the seven existing dams. The risks of having your boat swamped in rapids, colliding with one of the numerous bridge abutments, or being swept over a dam rise proportionally with the amount and speed of the river flow.

Boating accidents and drownings continue to happen along the Passumpsic. Only the flatwater reach between the Route 5 bridges north and south of Lyndonville is suitable for novice paddlers. The remainder of the river typically demands skill and experience in conditions ranging from Class I to Class III in fast and often turbulent water.

Section 4 of this guide provides information about the river stretches. The descriptions are provided for informational purposes and the conditions on the river are always changing.

Heed the **Caution and Warning** advice in this guide. All boating activities and other activities along the Passumpsic River are conducted at your own risk and it is your responsibility to understand and be prepared for conditions encountered on and along the river.

Caution items are called out to alert you to potential dangers on the riverway. See Section 3 for additional safety precautions.

Warning items are shown in red to alert you to greater dangers, including areas where you will need to portage around obstacles.

Conditions along the river are ever changing including water flows and obstructions along the riverway. Check USGS flow gages and other information prior to embarking on your trip. Note that seasonal boat barriers are placed upstream of the hydroelectric stations' dams and are in place most of the time between May 15 and November 15. Look for portage take-out signs to access portage trails around the hydro dams.

HISTORY OF THE RIVER

Euro-American settlement within the Passumpsic River watershed began in the 1770s, and during the next century the river provided useful water power for many small industrial enterprises. The numerous cascades and falls became the sites (or "privileges") for various kinds of mills. Simple, but effective, dams were constructed of log cribbing to divert the water to drive the wheels or turbines, and those were connected by shafts or belts directly to the milling machinery; this is known as hydromechanical power.

Saw and grist mills were usually the first to appear, almost contemporary with the original settlements, such as the mills built at Arnold Falls, St. Johnsbury, in 1787-88. Those mills produced the basic necessities, such as lumber for framed buildings and flour and grain for human and animal consumption. Other types of mills followed, including mills for pressing linseed oil and apple cider, fulling mills for finishing hand-woven wool cloth, and, during the latter 1800s, pulp mills for grinding wood to make cardboard.

Those mills sited at cascades or falls generally attracted additional settlers and commercial development to the vicinity. Hamlets emerged and, in most cases, subsequently expanded into villages ranging in size from East Barnet to St. Johnsbury. An exception occurred at the so-called Little Falls in Lyndon; during the latter half of the 19th century, the Lyndon Mill Co. developed a hamlet there that largely disappeared along with the industrial enterprise.

Most of the water-powered mills along the Passumpsic River were eventually destroyed either by floods or fires. With the introduction of electricity during the late 1800s, mills no longer needed the natural resource provided by water power, and thus could flourish in places not located along rivers. Changing national industrial conditions also had negative effects on the small local mills that had promoted much of the growth of settlements along the Passumpsic. By the early 1900s, the hydromechanical mill enterprises were generally obsolete.

FORT BAXTER

At the intersection of U.S. Route 5 and Interstate 91, just south of downtown St. Johnsbury, a solitary granite marker sits in the shade of the overpass on a bank above the river. Although most residents don't notice it, the marker commemorates the former site of Camp Baxter. By June 7, 1861, following the outbreak of the Civil War, companies from 11 surrounding towns, including St. Johnsbury, were assigned to the Third Regiment. It was decided that the rendezvous would be at a place named after adjutant and inspector General Baxter. The camp was built on the fairgrounds of the Caledonia County Agricultural Society, in St. Johnsbury. The camp, known locally as Fort Baxter, was a critical part of the state's Civil War history, for it was here most of the men who volunteered to fight in the war came before being sent to the front. Between September of 1861 and April of 1865, the Third Regiment fought in 28 battles. Among the more famous were Antietam, Gettysburg, Wilderness, Spotsylvania, Cold Harbor and Petersburg.

Private William Scott of Company K of the Third regiment of Vermont volunteers became one of the most famous Vermont soldiers of the Civil War. Scott, a 22-year-old who left his family's farm in Groton to enlist, fell asleep at his post. During the Civil War this was a crime punishable by execution. Scott knew this, but still voluntarily added the duty of a sick comrade to his own. During his second night at guard post, he was found asleep and sentenced to death. A petition for his release was circulated and signed by hundreds of soldiers, including General W.F. Smith.

On the evening before Scott's scheduled execution, the situation finally came to the attention of President Lincoln. Lincoln immediately ordered that Scott be released. The order was telegraphed, but when no reply was heard and fearing the message had not made it through, Lincoln himself journeyed by carriage to the fort. Scott was brought out, as if for death. He was deadly pale, and an occasional shudder shook his exhausted frame, but he asked for no mercy. Standing before a gathered crowd, a statement was read pardoning Scott for his crime.

Clearly, having Lincoln's opinion on the subject was significant. The statement, in part, noted Lincoln's wishes to spare Scott's life: ''This fact, viewed in connection with the inexperience of the condemned as a soldier, his previous good conduct and general good character, and the urgent entreaties made in his behalf, have determined the Major-General commanding to grant the pardon. This act of clemency must not be understood as affording a precedent for any future case. The duty of a sentinel is of such a nature, that its neglect by sleeping upon or deserting his post may endanger the safety of a command, or even of the whole army, and all nations affix to the offense the penalty of death. Private William Scott of Co. K, of the Third regiment of Vermont volunteers, will be released from confinement and returned to duty." The onlookers cheered as Private Scott was released. A mere seven months later, while charging the rebel pits at Lee's Mill, he was killed.

Back in St. Johnsbury, soldiers no longer trained at Fort Baxter, but citizens were well aware of the war because of the wounded or the dead who were returning home. John Green, who before the war had been the town's milkman, was captured and held in the Andersonville Confederate prison. In December of 1864 he was released. The army telegraphed Green's father to pick up his son, but before his father could get there, John died. "His body was brought home for a funeral service at the South Church, where horrified viewers reported he was 'nothing but a skeleton. '" Another young man, Sam Rollins from North Danville, suffered the same treatment while being shuffled through five different prisons. He died three weeks after returning home.

The Third Regiment was not only made up of soldiers. Boys under the age of 16 enlisted as drummer boys. Willie Johnson of St. Johnsbury was the drummer boy for Company D of the Third Regiment. When the regiment was forced to retreat from Virginia, many of the soldiers dropped their gear and ran. Johnson kept his drum, even though it made his retreat difficult. A week later, when the troops were reassembled for battle, Johnson drummed for the division parade. This was reported to Washington, and Johnson was later awarded a medal for his faithfulness by the secretary of war.

HYDROELECTRIC DEVELOPMENT ON THE RIVER

The technological shift to electricity reached the Passumpsic in the late 1880s, and during the subsequent quarter-century, its central main stem became the most intensively developed river in Vermont for hydroelectric generation. At least two of the earlier mill settings were adapted by 1890 for generating electricity. Formed in 1888, the St. Johnsbury Electric Light and Power Co. installed equipment at the Belknap shop (Gage Station site) just south of St. Johnsbury village, where electric street lighting appeared in 1889. At the Great Falls in Lyndon, the Wilder pulp mill received hydroelectric generating equipment in 1895, and the first arc lamps then illuminated the streets of Lyndonville.

A few industrial enterprises along the Passumpsic valley that started on a small scale during the hydromechanical era survived by expanding in scale and switching to electric power during the early 20th century. The most prominent example, the E.T. and H.K. Ide Co., originated in 1813 next to the falls at Passumpsic village. After enduring fires and floods there, the firm moved its primary enterprise to St. Johnsbury. In 1906, the Ides constructed a large new mill complex powered by electric motors for producing flour, grain, and feed.

Other small-scale hydroelectric stations were developed during the early 1900s, but not all of them have survived. The most catastrophic flood in the history of the Passumpsic valley occurred in November 1927, when the river rose to an unprecedented level estimated at 31.5 feet. The deluge submerged the valley bottom, destroying dams, many buildings, railroads, and highways. At least one generating station, at St. Johnsbury Center, was never rebuilt.

Seven active hydroelectric stations now (2017) exist between Lyndonville and East Barnet village. The Vail (Little Falls) and Great Falls stations belong to the Lyndonville Electric Department. The other five stations - Pierce Mills, Arnold Falls, and Gage in St. Johnsbury, and Passumpsic and East Barnet in Barnet - are owned by Green Mountain Power Corporation after a merger in 2012 with the predecessor Central

Vermont Public Service Corporation (CVPS). CVPS gained possession of the five stations in 1943 by merger with the Twin State Gas and Electric Co. The latter firm created the present system by consolidating and redeveloping the Pierce Mills, St. Johnsbury Center, Arnold Falls, Bay Street, Gage, and Passumpsic village sites during a thirty-year period starting with its purchase of St. Johnsbury Electric in 1913.

At this point, hydroelectric generation has continued for more than a century at all the Passumpsic stations except East Barnet (developed by CVPS in 1983). All of the active generating stations except East Barnet possess historic significance under Federal criteria, especially for their architectural character, and are eligible for listing in the National Register of Historic Places.

The powerhouses at three stations (Pierce Mills, Arnold Falls, and Passumpsic) constructed by Twin State Gas and Electric in 1928, represent the influence of the Georgian Revival style fashionable during that period. Highly similar in design, these compact, flat-roofed, brick buildings display round-arched windows and Classical decorative features typical of that style.

Dating from the previous decade (1915 and 1919-20, respectively), the Great Falls and Gage powerhouses express more utilitarian designs in reinforced concrete, although the Great Falls building shares the round-arched form in its windows. The Vail powerhouse from 1949 contrasts in its industrial simplicity of brick walls with square-headed windows.

The generating stations occupy sites that have been the focus of Euro-American industrial activities for about two centuries. Numerous stone and concrete foundations remain visible at those places to represent that heritage. Much less obvious but equally significant are the prehistoric artifacts that lie buried in the ground, both near the falls and elsewhere along the river valley. The archeological record represents a multi-thousand-year span of diverse Native American activities that occurred along the truly clear-running water of the river "Poosumpsuk."

2.0 GUIDES

REGIONAL RECREATION OPPORTUNITIES

Within the vicinity of the Passumpsic River, there are numerous opportunities for year-round outdoor recreation activities and many cultural heritage sites to visit. Following is a partial list of opportunities, as well as online sources for additional information. NorthWoods Stewardship Center (www.northwoodscenter.org) maintains many local trails and river sites and publishes several relevant maps and guidebooks.

STATE PARKS, FORESTS AND WILDLIFE AREAS

There are many state forests, parks and wildlife areas in the region. The 26,000-acre Groton State Forest, located southwest of St. Johnsbury, provides a variety of recreation opportunities, and includes seven state parks: Seyon Lodge, Ricker Pond, Boulder Beach, Big Deer, Stillwater, Kettle Pond, and New Discovery State Park. The Groton Nature Center provides nature exhibits, weekly programs, and concerts. The Victory State Forest and Darling State Park, located east of Lyndon, provide opportunities for camping, hiking, boating, fishing, hunting, horseback riding, wildlife viewing, snowmobiling, and snowshoeing. See the Vermont, Department of Forests, Parks and Recreation website at: http://fpr.vermont.gov.

HIKING, BIKING AND SKI TRAILS

Many hiking and biking trails are a short distance from the Passumpsic River. Kingdom Trails provides information about cross-country and biking trails within Vermont's northeast kingdom, http://kingdomtrails.org/.The east end of the Lamoille Valley Rail Trail is in St. Johnsbury and information is available at http://lvrt.org/. Burke Mountain Resort in East Burke offers amazing views and contains 36 ski trails, 14 glades, and a 2,011-foot vertical drop. Information is available at: http://skiburke.com/. The Vermont Outdoor Guide Association provides an online Trails Directory with additional information, available at: http://www.voga.org/Vermont_Recreation_Trails.htm.

BOATING AND PADDLING

The region provides many opportunities for both river and lake boating. The Vermont State Parks provides information about boating access points and rentals at Vermont State parks, Vermont boating laws, and additional information, such as links to other sites with boating information at http://vtstateparks.com/boating.html. Vermont Paddlers Club provides a source of paddling information at http://www.vtpaddlers.net/.

Boating maps and information for the Connecticut River can be found at the Connecticut River Joint Commissions website. Information is available at http://www.crjc.org/pubs/boating/. Other Connecticut River information, including maps and guides, access points, river etiquette guidelines, services along the river, and more is available at the Connecticut River Paddlers' Trail website at: http://www.connecticutriverpaddlerstrail.org/.

FISHING OPPORTUNITIES

The Passumpsic River is known for its' coldwater trout fishery, featuring brook trout (*Salvelinus fontinalus),* Vermont's only native dwelling trout, rainbow trout (*Oncorhynchus mykiss*), and brown trout (*Salmo trutta*). The Vermont Fish and Wildlife Department stocks trout and publishes the stocking schedule on their website. Trout fishing season typically opens the second weekend in April and extends through October. The stretch of the Passumpsic from the Connecticut River boundary upstream to the top of Arnolds Falls Dam in St. Johnsbury is open year-round for catch and release only trout fishing.

The Vermont Fish and Wildlife Department provides information about fishing opportunities, regulations and stocking schedules; descriptions and pictures of the various types of fish in Vermont; fishing basics (including the Vermont Fishing Guide and how to videos), boating and fishing access locations; and fishing events and programs online at http://www.vtfishandwildlife.com/.

ARTS AND MUSEUMS

There are several museums and cultural centers in the region:

- The Fairbanks Museum and Planetarium in St. Johnsbury provides a collection of natural science and historical exhibits and programs, as well as Vermont's only public planetarium. Visit http://www.fairbanksmuseum.org/.
- The St. Johnsbury Athenaeum, founded by Horace Fairbanks as a culture center for the town, is a public library and art gallery; featuring paintings by artists of the Hudson River School, as well as educational events. Visit https://www.stjathenaeum.org/.
- Catamount Arts in St. Johnsbury provides films; exhibitions by local and regional artists; and live music, dance, and theater performances. Visit http://www.catamountarts.org/about.
- Maple Grove Farm Museum and Gift Shop in St. Johnsbury provides opportunities to learn about Vermont's maple syrup industry. Visit http://www.maplegrove.com/.
- St. Johnsbury History & Heritage Center preserves historic collections and conducts educational programs that interpret the rich heritage of St. Johnsbury. Visit http://stjhistory.org/.

ADDITIONAL ONLINE SOURCES OF INFORMATION

- Vermont's Northeast Kingdom Chamber of Commerce in St. Johnsbury, Vermont. Visit http://nekchamber.com/.
- Vermont's Northeast Kingdom website provides regional information. Visit http://northeastkingdom.com/.
- NorthWoods Stewardship Center provides a variety of recreation and education programs as well as resource stewardship opportunities. For information on programs, maps, and services. Visit https://www.northwoodscenter.org/.
- The Vermont River Conservancy manages a website about the Passumpsic River, highlighting stewardship projects and opportunities to get involved. Visit http://www.vermontriverconservancy.org/.

GEOLOGY OF THE WATERSHED

Along the Passumpsic River there are good examples of several types of geological structures, including pillow structures in dark, volcanic rock, folded rocks, eskers, and sediment.

PILLOW STRUCTURES

Pillow structures can be found in the Passumpsic River behind New England Foam and Coating Inc. on Concord Avenue in St. Johnsbury. These structures resemble toothpaste that has been rapidly squeezed from the tube and allowed to pile up, forming pillow-shaped extrusions. These structures were formed when molten rock met cold sea water approximately 400 million years ago when a pre-Atlantic Ocean began to close and the continents came together to form one super continent.

FOLDED ROCKS

Interesting folded rock patterns can be found in the Passumpsic River approximately 500 feet below the dam at the Lyndonville Electric plant (Great Falls) behind Fusion Grill on Route 5 in Lyndonville. As the earth's surface is compressed, folding or faulting can occur in rock formations. Rocks at relatively shallow depth are brittle, while deeply buried rocks are ductile and bend and flow, creating zigzagging patterns.

ESKERS

The Passumpsic Esker extends down both the East and West branches of the river and ends just below St. Johnsbury. It is highly visible on Route 5 heading toward West Burke, just above the Calendar Brook tum, where the road runs along an elevated gravel ridge. The ridge appears to be man-made, but is a natural sediment deposit.

The Ice Age in North America began over two million years ago. The glaciers left Vermont about 11,500 years ago. During the Wisconsin glaciation (18,000-20,000 years ago), New England was under ice that was as much as a mile thick in places. As the glaciers began to melt, eskers formed as tunneling streams beneath the glaciers deposited sediment along their subglacial paths to be later exposed as gravel

ridges. The Passumpsic Valley esker, 24 miles long, is the longest and best-formed esker in either Vermont or New Hampshire.

SEDIMENT LAYERS

Along the floodplains of the Passumpsic and Moose rivers, sediment layers are visible in the banks. These layers show what was deposited in the former Connecticut Valley Lake, also known as glacial Lake Hitchcock.

Numerous temporary glacial lakes formed between the melting glacier and the high ground south of the glacial front. The Connecticut Valley Lake stretched from the Canadian border to Middletown, Connecticut, where it was dammed by a glacial moraine which was eventually breached by overflow. A moraine is a debris ridge deposited as the advancing glacier melted back at the same rate at which it was advancing. The present day Passumpsic River valley and part of the Moose River valley formed a branch of the Connecticut Valley Lake.

DIKES

At the south-bound Lyndonville exit off I-91, a lava dike is visible in the rock cut on the right side of the highway just above the exit. A dike is an intrusion of magma into a crack in the existing formation. In this case, the dike is a different color than the surrounding rock. It is visible as a column of rock which resembles the cross-section of a concrete wall.

These are some of the geological features visible along the Passumpsic and Moose rivers. A little to the east of the Connecticut River, running northeast to southwest, is an important plate tectonic boundary. This boundary separates two very different terrains of ancestral North America. Geologists speculate the area may have been part of Europe or Africa. There are many more interesting formations throughout the valley.

COMMON VEGETATION OF THE WATERSHED

Following is a summary of some of the common herbs, ferns, and shrubs along the banks of the Passumpsic River. The Fairbanks Museum in St. Johnsbury maintains a display of fresh native wildflowers throughout the season.

COMMON HERBS AND FERNS

- The Joe-Pye-weed (*Eutrochium maculatum*) has a single main vein that branches out to support a cluster of small purple flowers. This herb is commonly found in damp meadows and thickets.
- The Canada Lily (*Lilium canadense*) is an open, yellow, bell-shaped flower with its petals pushed back upwards. The flower usually opens downward. It most commonly grows in meadows and swamps.
- The Tall Meadow-Rue (*Thalictrum polygamum*) has light green shaped leaves that grow below clusters of small, white, club-shaped flowers. This herb is most commonly found in sunny swamps and low meadows.
- The Sensitive (*Onoclea sensibilis*) is an unfernlike fern. Its sturdy, coarse vein supports triangular shaped leaves that tilt backwards and upwards. It is easily recognizable by its prominent network-forming veins and grows to an average of 12 inches tall.
- The Hay-Scented Fern (*Dennstaedtia punctilobula*) is a brittle, yellow-green fern. It appears a bit ragged in the late summer. It usually stands erect or somewhat arching and grows to an average of 7 inches. It thrives in moist sandstone ravines.
- The Interrupted Fern (*Osmunda claytoniana*) is a large, coarse fern, arching in growth, with distinct interruptions in the center of its leaves. This fern prefers to grow in stony, dry soil.

COMMON SHRUBS

- The honeysuckle (*Lonicera canadensis)* has greenish-yellow flowers with leaves that are egg-shaped, rounded or slightly heart-shaped with fine hair at the bottom of the stem.
- The Black Cherry (*Prunus serotina*) is a tree-like bush with blunt¬toothed leaves with reddish smooth twigs. This bush produces a berry that is dark red or purplish in color. The rest of the plant is poisonous and should not be eaten.
- The blackberry bush (*Rubus*) grows in dry fields and clearings. It produces a one-inch-wide flower, with long petals and black fruit.

POISONOUS PLANT SPECIES

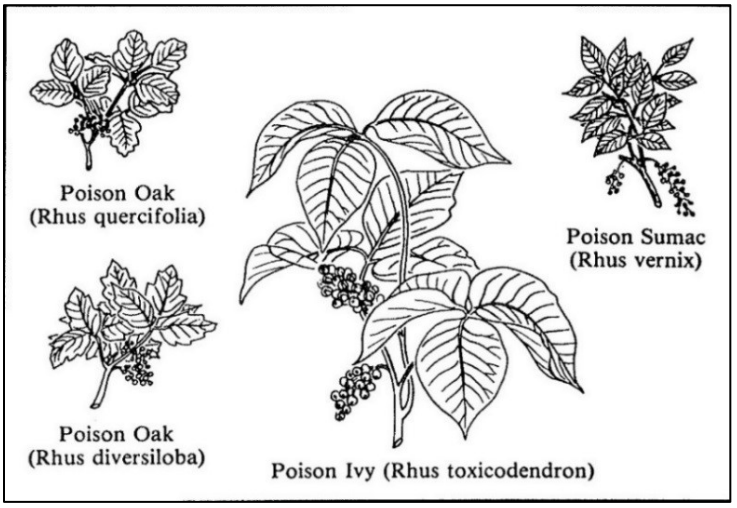


FIGURE 2 POISONOUS PLANT SPECIES

Many plants, including some found in Vermont, have a poisonous sap in their stems, leaves, roots, or fruit which can cause an allergic reaction in people after skin contact or when ingested or inhaled. Symptoms can include: rash, blistering, swelling, lung irritation, burning sensation, skin irritation or inflammation, itching, wheezing and stinging.

AQUATIC INVASIVE SPECIES IN VERMONT

Invasive Species are non-native species that cause harm to the environment, the economy or to human health. Nuisance species can be native or non-native and may cause ecological or economic harm. Invasive and nuisance plants spread and grow quickly and can degrade fish, wildlife, and plant habitat, damage crops, or cause the loss of recreational opportunities. Invasive species crowd native species, form dense mats that block sunlight and inhibit growth of native species.

In Vermont, there are about 50 non-native aquatic species that include plants (e.g., water chestnut, Eurasian water-milfoil, hydrilla), invertebrates (e.g., zebra mussels, Asian clam), fish (e.g., rudd, alewife), and fish diseases and parasites. The Vermont Agency of Natural Resources provides information on what you can do to help stop the spread of aquatic invasive species. To help stop spreading aquatic invasive species, before moving boats between waterbodies:

- **CLEAN** off any mud, plants, and animals from boat, trailer, motor and other equipment. Discard removed material in a trash receptacle or on high, dry ground where there is no danger of it washing into any water body.

- **DRAIN** all water from boat, boat engine, and other equipment away from the water.

- **DRY** anything that comes into contact with the water. Rinse your boat, trailer parts and other equipment with hot, high pressure water or alternatively dry in the sun for at least five days.

For more information and pictures about aquatic invasive species in Vermont see the Vermont Department of Environmental Conservation website at: http://dec.vermont.gov/watershed/lakes-ponds/aquatic-invasives.

3.0 PADDLING SAFETY, GEAR AND ETHICS

PADDLING SAFETY CONSIDERATIONS

There are many different hazards on a river. Make sure you have a map of the area, and be prepared for hazards that are not shown on maps. These hazards might include fallen trees that block the river and changing water levels. Even if you are familiar with a river, be prepared for hazards that have appeared since your previous trip down that stretch. Also, black flies and mosquitoes can be a dangerous distraction while canoeing. Other dangers include changes in the weather and exposure to water temperatures that might lead to hypothermia or heat exhaustion in warmer weather.

Know how much expertise you have in canoeing/kayaking. Even in rapids, you should be able to stop. If you cannot stop within a reasonable distance, you are paddling over your ability. Paddle rivers that match your ability level and always practice on rivers you know. Always have the correct safety equipment and know what to pack and how much, and what to wear.

Following are some additional paddling safety considerations:

- Always wear a personal flotation device (PFD), even if you know how to swim.
- Know proper strokes and how to launch, dock, start and stop a canoe/kayak.
- Never boat alone and leave word where you are going and how long you will be gone.
- Know your ability and use common sense. If in doubt, land and check water conditions from the shore.
- Do not run rapids without a guide familiar with the area.
- Be aware of and respect weather conditions and water temperatures. Do not boat in electric or wind storms.
- Do not paddle after dark, stop and rest as needed, and stay close to the shore.

- Do not exceed the weight capacity of your boat. You are at risk of capsizing even in still water.
- Watch for ripples in the water which often indicate submerged rock, sandbars, or other hazards to avoid.
- Keep hydrated and bring sufficient water and food.

This is just a summary of safety considerations. Research and know the area in which you are paddling before you start. All paddling activities and other activities along the Passumpsic River are conducted at your own risk and it is your responsibility to understand and be prepared for conditions encountered on and along the river.

PADDLING GEAR

Following is a list of paddling gear to consider for your canoe/kayak paddling trip. This list is not comprehensive; check available on-line sources for additional safety information and paddling gear lists.

- Canoe/Kayak
- Paddles
- Personal Flotation Devices
- Paddle Leash/Float
- Rope/Towline/ Bungee Cords
- Portage Wheels/Yoke
- Bailer
- Spray Skirt
- Seat/Knee Pads
- Waterproof Packs/Dry Bags
- Emergency Kit
- Signaling Devices (e.g., whistle)
- Maps/Paddling Guide
- Compass
- Cell Phone (in protective bag)
- Protective Clothing
- Repair Kit/Duct Tape
- Sunglasses/ Sunscreen
- Insect Repellant
- Water Bottle
- Energy Food
- Pocket Knife/Tool
- Matches/Lighter
- Medical Needs
- Flashlight
- Fishing Gear/License
- Proper footwear

Additional information for safety tips and gear is available at the American Canoe Association website at http://www.americancanoe.org and the American Whitewater website at: https://www.americanwhitewater.org/.

WHITEWATER BOATING INFORMATION

American Whitewater has created a system to rate the difficulty of boating a stretch of river or single whitewater rapid. The rating system extends from Class I: Easy to Class VI: Extreme and Exploratory Rapids. American Whitewater's website provides information to describe the distinctions of each Class in the rating systems, and provide information about many river reaches, including difficulty/class description, and postings and comments from boaters who have run the reaches.

American Whitewater also provides information about personal preparedness and responsibility, boat equipment preparedness, group preparedness and responsibility, guidelines for river rescue, and universal river signals. Information about these topics can be found at the American Whitewater website at: https://www.americanwhitewater.org/.

PADDLING AND LAND USE ETHICS

In the Vermont tradition, many private landowners open their fields for recreation. Sometimes you don't need permission and sometimes you do. Ask to be sure. Public use of private lands is a privilege. In Vermont, it is illegal to drive, ride or camp on private property without the landowner's permission. People's livelihoods depend on forests and farms. Respect cultivated fields, tree plantations, maple sugaring equipment, pastures and hay fields. Leave gates as you found them. Don't cut trees.

Respect wildlife and observe from a distance. Prevent the spread of invasive species. Share the river and respect others on the river; give anglers and other boaters a wide berth when passing. Stay on designated trails. In addition to having respect for the landowners, honor as well the land itself. These simple ethics encompass much of the proper attitude you should take with you: Respect and be considerate of others; take nothing but photographs, leave nothing but footprints. Follow Leave-No-Trace principles -https://lnt.org/.

4.0 MAPS AND PADDLING GUIDE

The following section provides a description of the various features, as well as historic information, along the Passumpsic River reaches, including the East Branch, West Branch and mainstem, as well as an overview of the Moose River.

The riverway maps provide river mile designations as well as key features. The river mile designations are based on the initial point of river mile 0 at the confluence of the Passumpsic River with the Connecticut River. River miles for the tributaries begin at zero at their confluence with the Passumpsic.

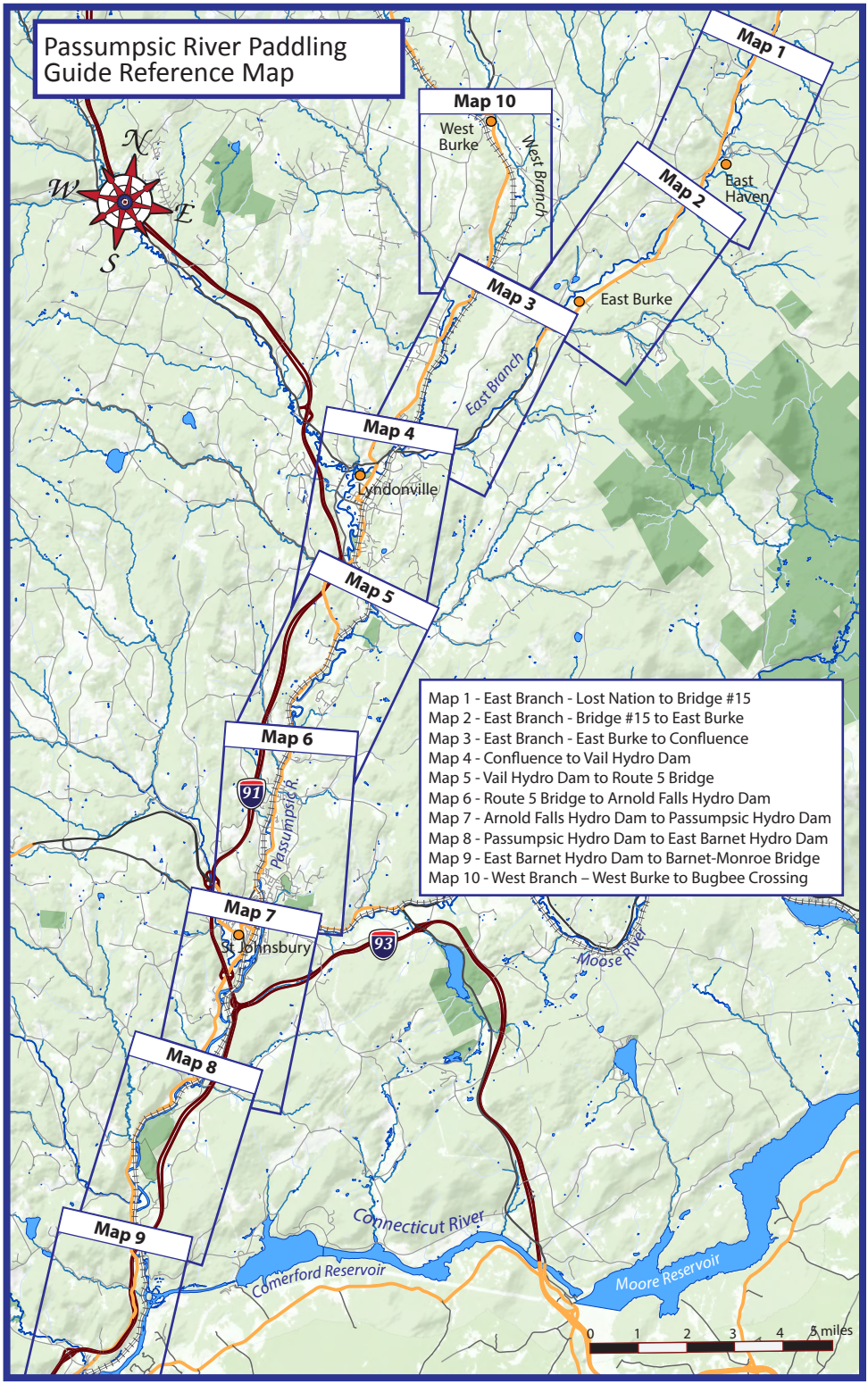
Below is a legend for the key symbols used on the riverway maps.

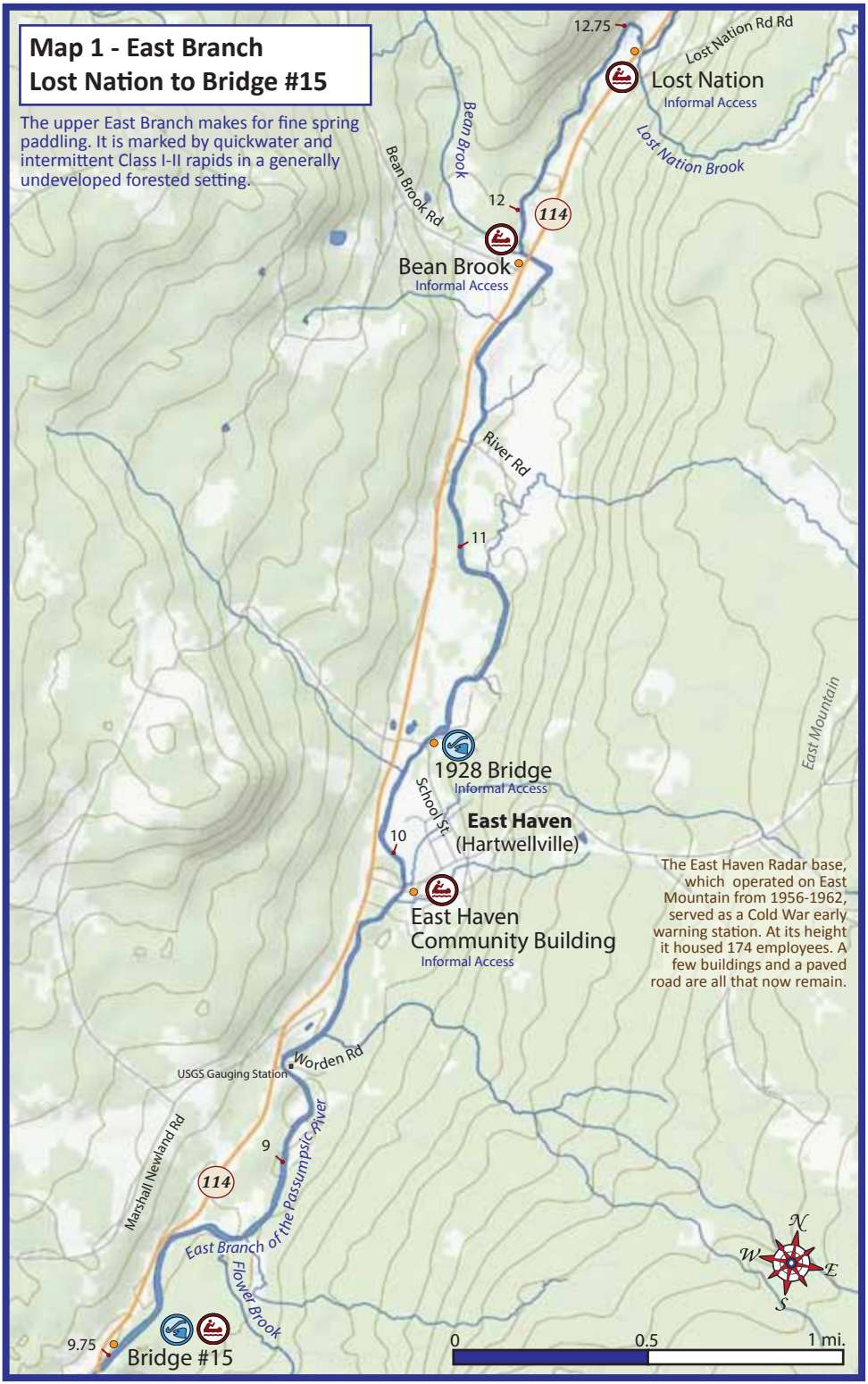
Warning items are shown in red to alert you to dangers, including areas where you will need to portage around obstacles.

Caution items are called out to alert you to potential dangers on the riverway. **Portage** locations and routes are identified.

Public and informal access locations are identified, but these access locations may change and it is your responsibility to acquire the appropriate approvals to access any private lands.

All boating activities and other activities along the Passumpsic River are conducted at your own risk and it is your responsibility to understand and be prepared for conditions encountered on and along the river.


Passumpsic River Paddling Guide Reference Map
N
W
E
S
Map 1
Map 2
Map 3
Map 4
Map 5
Map 6
Map 7
Map 8
Map 9
Map 10
West Burke
West Branch
East Haven
East Burke
East Branch
Lyndonville
91
Passumpsic R.
St Johnsbury
93
Moose River
Connecticut River
Comerford Reservoir
Moore Reservoir
0 1 2 3 4 5 miles
Map 1 - East Branch - Lost Nation to Bridge #15
Map 2 - East Branch - Bridge #15 to East Burke
Map 3 - East Branch - East Burke to Confluence
Map 4 - Confluence to Vail Hydro Dam
Map 5 - Vail Hydro Dam to Route 5 Bridge
Map 6 - Route 5 Bridge to Arnold Falls Hydro Dam
Map 7 - Arnold Falls Hydro Dam to Passumpsic Hydro Dam
Map 8 - Passumpsic Hydro Dam to East Barnet Hydro Dam
Map 9 - East Barnet Hydro Dam to Barnet-Monroe Bridge
Map 10 - West Branch – West Burke to Bugbee Crossing


Map 1 - East Branch
Lost Nation to Bridge #15
The upper East Branch makes for fine spring paddling. It is marked by quickwater and intermittent Class I-II rapids in a generally undeveloped forested setting.
12.75
Lost Nation Rd Rd
Lost Nation
Informal Access
Bean Brook
Lost Nation Brook
Bean Brook Rd
12
114
Bean Brook
Informal Access
River Rd
11
1928 Bridge
Informal Access
School St.
East Haven
(Hartwellville)
10
East Haven
Community Building
Informal Access
East Mountain
The East Haven Radar base, which operated on East Mountain from 1956-1962, served as a Cold War early warning station. At its height it housed 174 employees. A few buildings and a paved road are all that now remain.
Worden Rd
USGS Gauging Station
Marshall Newland Rd
9
114
East Branch of the Passumpsic River
Flower Brook
9.75
Bridge #15
N
W
E
S
0
0.5
1 mi.

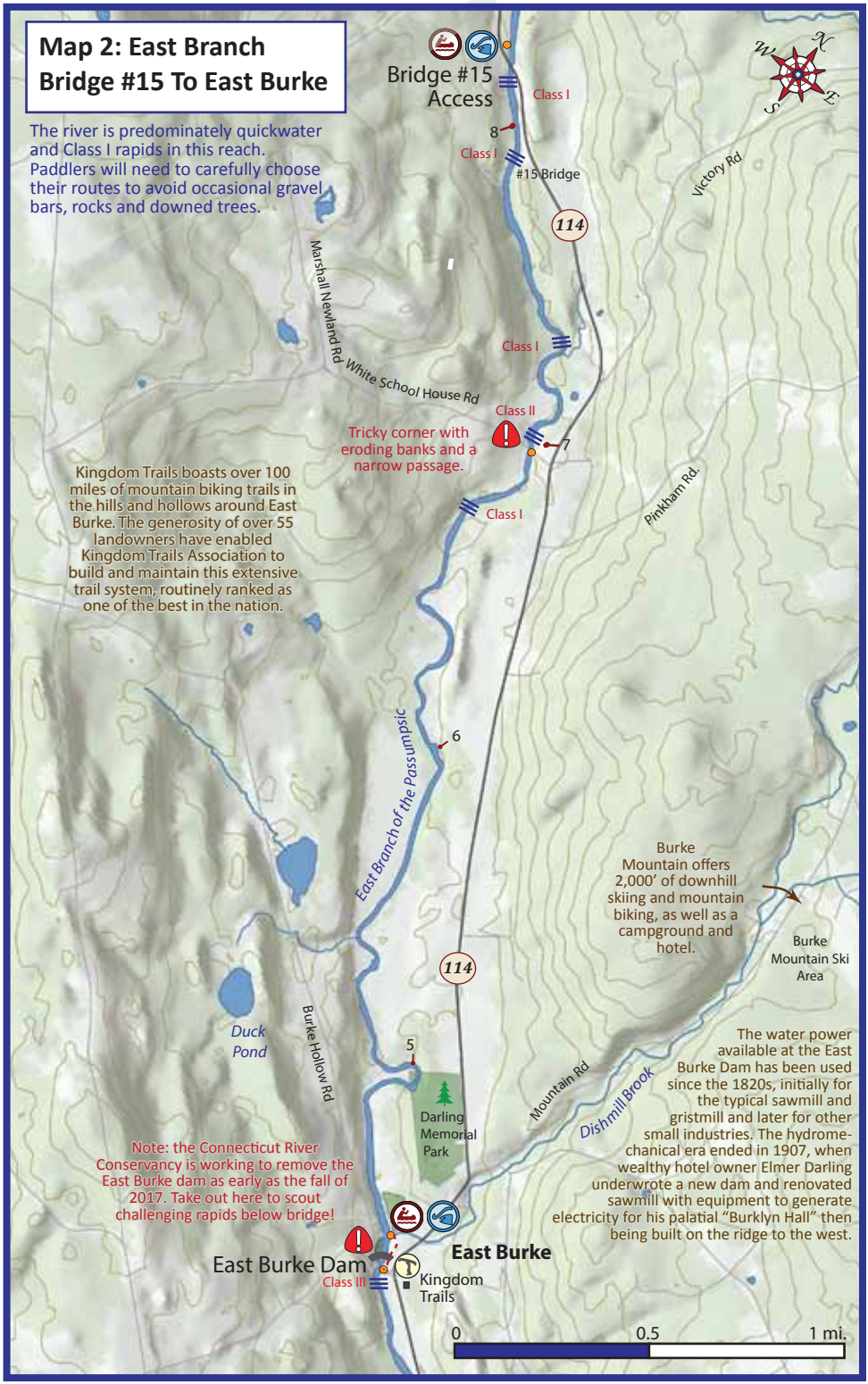
MAP 1 – EAST BRANCH - LOST NATION TO BRIDGE #15

The East Branch of the Passumpsic River begins near the northern border of Caledonia County and near Essex County where it gathers the headwater streams flowing down from the Hogback, Seneca, and East Haven ranges. While creek boating is possible in the eastern lowlands of Newark, the river is generally not navigable until Bean Brook deposits its generous waters near the East Haven-Newark boundary.

Paddlers can access the upper East Branch at either of two small put-ins located along Vermont Route 114. The northernmost is situated near the base of Lost Nation Road in East Haven, where there is a small gravel turnout on the west side of the road. Keeping within the highway right-of-way and avoiding the nearby posted meadow, paddlers can enter the river next to the bridge. From here (Mile 12.6), the river makes a sharp bend and soon reaches the confluence with Bean Brook, which drains several ponds in Newark and Westmore. Immediately, the river approaches a second highway bridge where an alternate put-in is located on the right, between the East Haven Cemetery and highway corridor. Limited parking is available nearby at the cemetery and along Bean Brook Road.

Passing under the bridge (Mile 11.8), the river begins a long stretch of intermittent Class I to II rapids that are navigable during spring and fall high-water events – generally over 400 cfs as measured at a nearby gauging station of the U.S. Geological Survey (Gage No. 01133000). The river in this area is generally undeveloped as it passes through riparian forestlands, open lands and scattered housing.

Passing under a small, private bridge (Mile 11.3), the river soon approaches the first of two bridges (Mile 10.3) (1928 Bridge) in the small village of East Haven (Hartwellville) where a short wave train riles the river before it moderates again and approaches the second, larger School Street Bridge (Mile 9.9), situated a short distance upstream of the East Haven Community Building. Paddlers may take out at the bridge or shortly thereafter. A public trailhead, located nearby at the municipal complex, offers parking. Continuing south from East Haven, the river widens and offers a steady mix of moderate Class I to II quickwater.


Map 2: East Branch
Bridge #15 To East Burke
The river is predominately quickwater and Class I rapids in this reach. Paddlers will need to carefully choose their routes to avoid occasional gravel bars, rocks and downed trees.
Bridge #15 Access
Class I
8
Class I
#15 Bridge
Victory Rd
114
Marshall Newland Rd
White School House Rd
Class I
Class II
Tricky corner with eroding banks and a narrow passage.
7
Kingdom Trails boasts over 100 miles of mountain biking trails in the hills and hollows around East Burke. The generosity of over 55 landowners have enabled Kingdom Trails Association to build and maintain this extensive trail system, routinely ranked as one of the best in the nation.
Class I
Pinkham Rd.
6
East Branch of the Passumpsic
Burke Mountain offers 2,000' of downhill skiing and mountain biking, as well as a campground and hotel.
Burke Mountain Ski Area
114
Duck Pond
Burke Hollow Rd
5
Darling Memorial Park
Mountain Rd
Dishmill Brook
The water power available at the East Burke Dam has been used since the 1820s, initially for the typical sawmill and gristmill and later for other small industries. The hydromechanical era ended in 1907, when wealthy hotel owner Elmer Darling underwrote a new dam and renovated sawmill with equipment to generate electricity for his palatial "Burklyn Hall" then being built on the ridge to the west.
Note: the Connecticut River Conservancy is working to remove the East Burke dam as early as the fall of 2017. Take out here to scout challenging rapids below bridge!
East Burke Dam
Class III
East Burke
Kingdom Trails
0
0.5
1 mi.

MAP 2 – EAST BRANCH - BRIDGE #15 TO EAST BURKE

Bending sharply east, the river passes under a small bridge where the USGS gauging station is situated on the western bank (Mile 9.3). From here, the river diverges from the road before entering another series of small rapids and reaching a concrete bridge (Bridge #15) with an access area on the right (Mile 8.2). Paddlers taking out of the river should exit upstream of the bridge and carry their boats up the grassy slope. For those continuing downriver, there is a small eddy pool below the concrete abutments. This is the last convenient take-out point before entering the 4-mile stretch of river above the village of East Burke.

Below the Bridge #15 angler access and concrete bridge, the river broadens and paddlers will need to carefully choose their routes, taking care to avoid occasional gravel bars, rocks and downed trees.

Caution: Paddlers must navigate a dangerous corner above the White School Road bridge (Mile 7.0), where the eroding channel has undermined shoreland trees and carved narrow, braided chutes. There are no convenient eddies in this area, making access challenging.

Below White School Road, the river meanders more as it winds its way south, passing sand and gravel bars. Above East Burke Village, the river slows and passes by several open agricultural fields before reaching the confluence with Dishmill Brook on the left (Mile 4.5).

Warning: All boaters must exit the river and scout and/or portage around the East Burke Dam site!

Portage - Find the portage trail on the left, adjacent to the mouth of Dishmill Brook, and follow it south, around the dam site and across the Burke Hollow Road. Access to the river appears convenient just downstream of the dam, however, do not launch above the Burke Hollow Road bridge unless you are an expert paddler and scout the river just downstream from the bridge. Enter the river below the Burke Hollow Road Bridge on river left (behind the garage) or upstream of the bridge on river right, where a small gravel pull-off provides access to Passumpsic Valley Land Trust land.

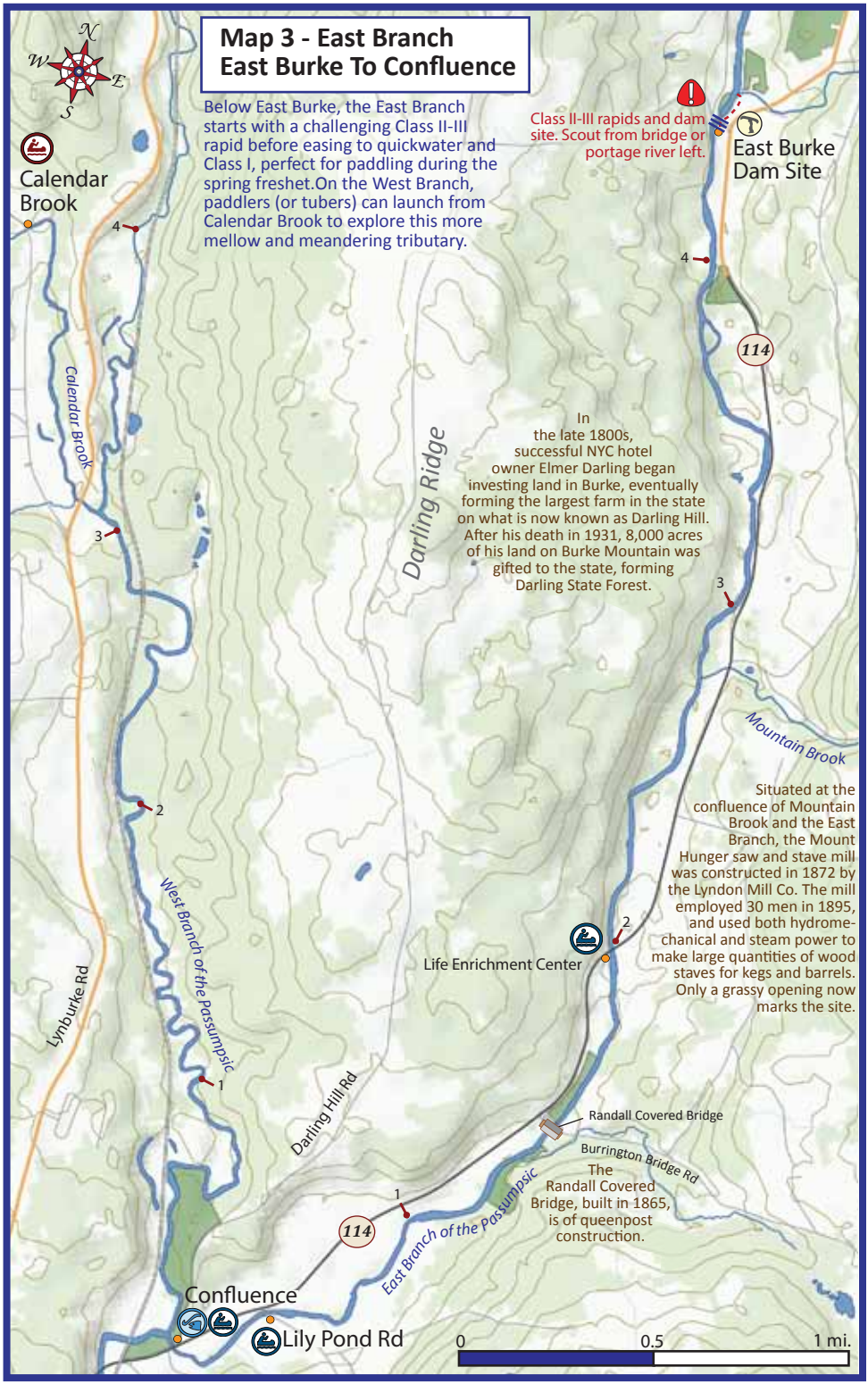
Efforts are underway to remove the historic East Burke Dam. However, even if removed, this area will require portaging or careful scouting due to the presence of ledge features and a challenging Class II to III rapid that extends south below the Burke Hollow Road Bridge.

Warning (Mile 4.3): A potentially dangerous Class III ledge exists just below the Burke Hollow Road bridge on river right, hidden from upstream view. Paddlers should carefully scout this section of river and plan accordingly.

The 1927 flood destroyed the log-crib dam and generating capacity. Rebuilt in concrete, the dam has not served industry since the sawmill succumbed to fire in 1958. The deteriorated East Burke Dam site is currently owned by the Passumpsic Valley Land Trust.

A group of canoers conducting a canoeing and water safety review before enjoying their trip down the river **(Courtesy of Frank Chaloux)**

PHOTO 1 PADDLING SAFETY REVIEW AT PASSUMPSIC STATION


Map 3 - East Branch
East Burke To Confluence
Below East Burke, the East Branch starts with a challenging Class II-III rapid before easing to quickwater and Class I, perfect for paddling during the spring freshet.On the West Branch, paddlers (or tubers) can launch from Calendar Brook to explore this more mellow and meandering tributary.
Class II-III rapids and dam site. Scout from bridge or portage river left.
East Burke Dam Site
Calendar Brook
Calendar Brook
Darling Ridge
In the late 1800s, successful NYC hotel owner Elmer Darling began investing land in Burke, eventually forming the largest farm in the state on what is now known as Darling Hill. After his death in 1931, 8,000 acres of his land on Burke Mountain was gifted to the state, forming Darling State Forest.
Mountain Brook
Situated at the confluence of Mountain Brook and the East Branch, the Mount Hunger saw and stave mill was constructed in 1872 by the Lyndon Mill Co. The mill employed 30 men in 1895, and used both hydromechanical and steam power to make large quantities of wood staves for kegs and barrels. Only a grassy opening now marks the site.
Life Enrichment Center
West Branch of the Passumpsic
Lynburke Rd
Darling Hill Rd
Randall Covered Bridge
Burrington Bridge Rd
The Randall Covered Bridge, built in 1865, is of queenpost construction.
East Branch of the Passumpsic
114
114
Confluence
Lily Pond Rd
0
0.5
1 mi.

MAP 3 – EAST BRANCH - EAST BURKE TO CONFLUENCE

The river descends about 100 feet along the next 4.5 miles to the confluence where the East and West branches join to form the main Passumpsic River north of Lyndonville. Rated generally at Class II, this section starts quickly and becomes a fun and fast run in spring when runoff provides quick, bouncing water. Keep watch, however, for the sudden appearance of rocks, downed trees, and small rapids. The river consists of a series of rapids with few pools in between, recommended only for paddlers who have some whitewater experience.

The narrow, intimate feel of the river, combined with the wooded and pristine landscape, make this reach a delightful float. Whitewater and riffles continue, however, and paddlers must constantly watch for the proper route, negotiating the channel and avoiding the numerous gravel bars. After the river crosses the town boundary into Lyndon, a small brook enters on the left. Then around the next curve to the right, Route 114 returns to follow the left bank of the river.

The highway veers away from the river a quarter-mile upstream from the confluence with Mountain Brook on the left. The brook rises on the southwest slope of its namesake 3,270-foot Burke Mountain, and flows down through a ravine to the small settlement around the former Mount Hunger District School just uphill from Route 114.

The river passes open fields on the left and reaches the Route 114 bridge (Mile 1.9) where there is an informal access (Life Enrichment Center) below the bridge on river right. A large gravel pull-off provides parking. Take a breath under the Route 114 bridge, then enjoy the quick ride past the swirling entrance of a brook a half-mile downstream on the left. Just below the brook, the river flows under two juxtaposed and contrasting bridges. The concrete-and-steel bridge built in 1965 carries the Burrington Bridge Road (Mile 1.4) next to the Randall Covered Bridge (built in 1865).

The river begins to slow as it winds onto the gentler gradient of the valley above Lyndonville. The rise of Bemis Hill to the right, and the distant slopes of 2,750-foot Kirby Mountain to the left, give this section the feel of a remote mountain stream. Although the river widens as it approaches the confluence with the West Branch, continue to watch for downed trees, boulders, and whitewater. A series of quickwater runs just after a bend in the river allows little time for preparation.

Lily Pond Road Public Access (Mile 0.4): Immediately downstream on river left, there is a formal access maintained by the Town of Lyndon (sometimes referred to as the 'Upper Tubing Access'), and adjacent to the Lyndon Town School playing fields. A quarter-mile farther downstream, the river takes an abrupt right turn toward the next Route 114 bridge and soon reaches the confluence, where the swirling waters of the West Branch enter on the right to join the East Branch and form the main stem of the Passumpsic River. The currents here are tricky and have a tendency to fool boaters.

Confluence Public Access (Mile 23.6): Just beyond this Route 114 bridge, on river right, the Passumpsic Valley Land Trust maintains a formal public, hand-carry boating access on the sandy point where the East and West branches of the river join.

The first of several railroad bridges spans the enlarged river just downstream from the confluence. (The railroad follows the West Branch for several miles upstream through West Burke.) Then, around a broad bend to the left, the curved bridge at Folsom's Crossing carries Route 114 over the river for the last time. The name refers to the Route 114 railroad crossing just east of the bridge, known during the late 1800s as Charles Folsom's Station when trains brought crowds to the nearby Trotting Park (fairgrounds).

Map 4 - Confluence to Vail Hydro Dam

MAP 4 – CONFLUENCE TO VAIL HYDRO DAM

As the river slows onto the wide plain where the village of Lyndonville has developed, it drops much of the sand and gravel it has carried down from the highlands. Remember that these obstructions continue below the surface of the water for some distance, so that the "tail" and the "head" of these features are often likely places to get your boat hung-up in shallow water.

Around a broad curve to the right, the river turns westward and passes under another pair of juxtaposed contrasting bridges. The concrete-and-steel U. S. Route 5 bridge comes first, followed by the adjacent Sanborn or Center Covered Bridge. The meandering river cuts deeper banks along this section, and makes a horseshoe bend toward the south and reaches the mouth of Millers Run on the right.

Between here and the Route 5 bridge south of Lyndonville, the Passumpsic twists and turns through a series of flat meadows and oxbow ponds. Having minimal gradient, the river doubles back on itself and then winds around again, providing boaters an ever-changing view of the pretty landscape around Lyndonville and Lyndon Center.

The low, flat banks indicate that this section of the river is subject to frequent flooding. Islands, sandbars, small backwaters, and oxbow ponds are all signs to the observant boater that the river has frequently shifted its course and found a new channel amid the cattails and rushes.

Lyndon Public Access (Mile 21.5): At the end of an S-curve, paddlers will find the Town of Lyndon boat access on the left bank.

Immediately below a tributary brook on the right, the Route 122 bridge provides a link between the older village of Lyndon Center on the west side of the river and the larger Lyndonville on the east side.

Despite the busy highways that intrude onto this section, the meandering Passumpsic retains its own narrow corridor of wildness. The clear-flowing South Wheelock Branch passes Lyndon Corner village, and contributes additional water to the river on the right. Immediately downstream is the Lower Lyndon informal access at the Route 5 bridge.

PHOTO 2 TOWN OF LYNDON BOAT ACCESS
(COURTESY OF NOAH POLLOCK)

Lyndonville owes its existence to the Connecticut and Passumpsic Rivers Railroad that was constructed along the namesake valleys between Wells River and Newport during the 1850s. After an 1866 fire destroyed the railroad's shops in St. Johnsbury, the company developed a sprawling complex of shops, roundhouse, and multi-track yards on the flat farmland opposite Lyndon Center. The architects also planned the pattern of streets and building lots in the adjacent area for commercial and residential development.

Downstream from the Route 5 bridge, the Passumpsic soon leaves the highway congestion behind, and the railroad returns to follow the left bank. The river then slows into the backwater behind the first of seven hydroelectric dams that exist along the next 17 miles.

Warning (Mile 18.5): All boaters must portage around the Vail Hydroelectric Station dam!

Portage - About 100 yards before the dam, approach the left bank and look for a grassy opening in the trees that marks the start of the portage trail. Follow the 175-yard trail past the powerhouse and, beyond a chain-link fence, continue down the steep trail to the gravel beach below the dam.

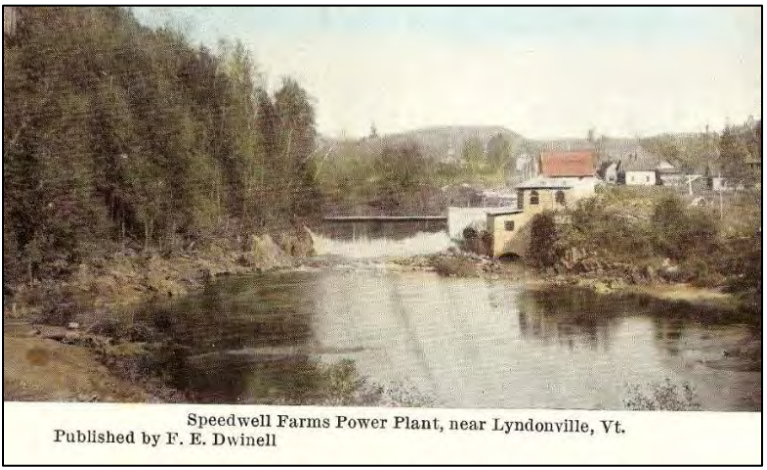


PHOTO 3 **SPEEDWELL FARMS POWER PLANT AT LITTLE FALLS, C. 1910**
(COURTESY OF HUGH H. HENRY)

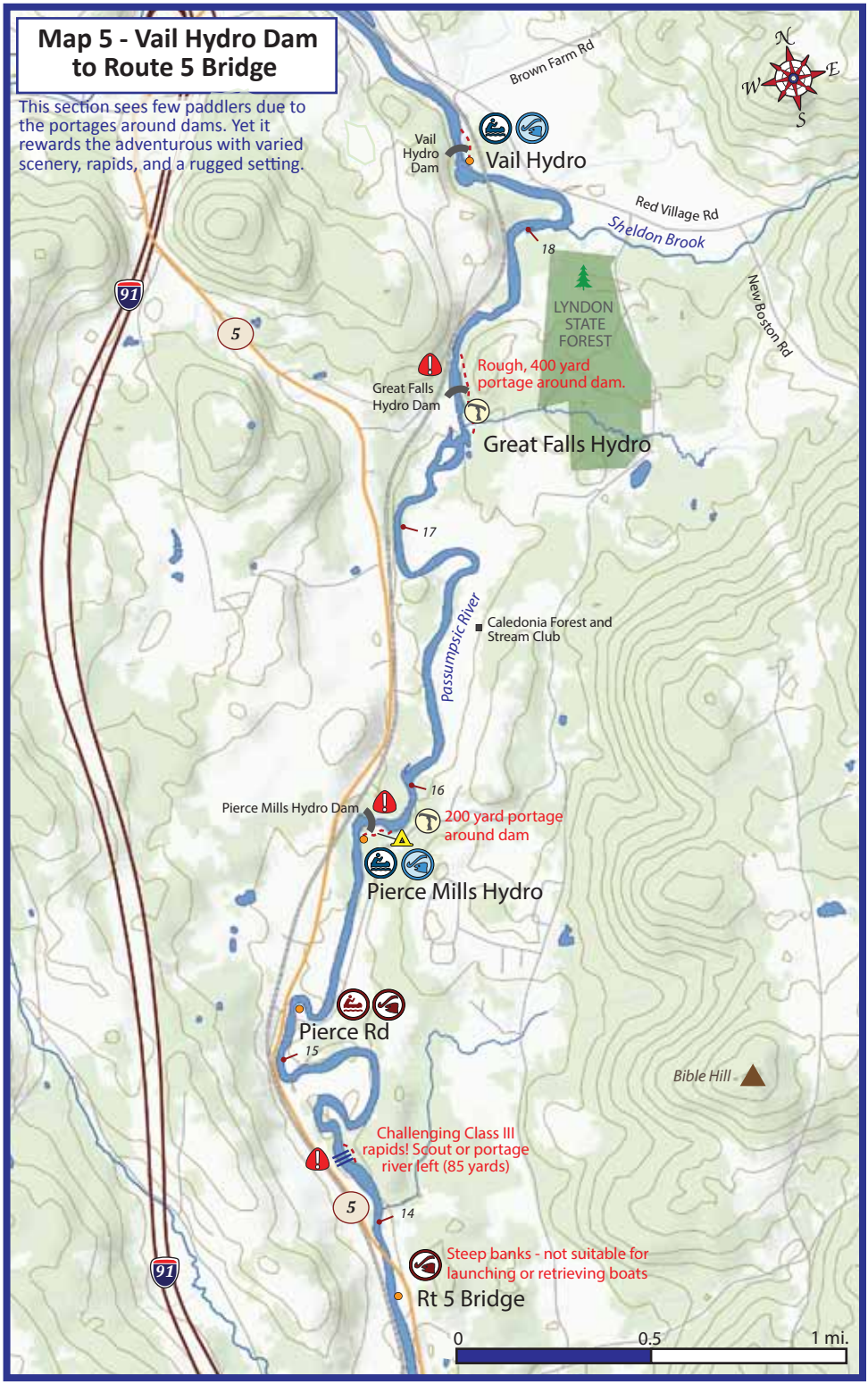
The Vail dam occupies the 20-foot drop of the Little Falls, an important source of hydromechanical power during the 19th century for several industrial enterprises, notably the large Lyndon Mill Co. sawmill and gristmill.

About 1910, Theodore N. Vail, the wealthy president of the American Telephone and Telegraph Co., developed the first generating station here to supply electricity for his Speedwell Farms and manorial residence (now the setting of Lyndon State College). The Lyndonville Electric Department acquired this generating station in 1921, and replaced Vail's stylish powerhouse with the present utilitarian brick building in 1949.

Below the concrete dam, the Passumpsic swirls around an eddy pool and then curves to the left, passing under another railroad bridge.

Map 5 - Vail Hydro Dam to Route 5 Bridge

This section sees few paddlers due to the portages around dams. Yet it rewards the adventurous with varied scenery, rapids, and a rugged setting.



MAP 5 – VAIL HYDRO DAM TO ROUTE 5 BRIDGE

Downstream of the railroad bridge, the Passumpsic forms a horseshoe bend to the right with Sheldon Brook entering on the left. After the horseshoe, the river nudges the railroad embankment on the right, and around the next right curve passes the massive cut-stone abutment of a former railroad bridge. The river then makes a broad curve to the left into a narrow gorge between low hills. The current slows into the backwater of the Great Falls Hydroelectric Station dam. Another railroad bridge was sited where the stone masonry crowns a rock outcrop on the right bank about 600 feet before the dam.

Warning (Mile 17.4): All boaters must portage around the Great Falls dam!

Approach along the left bank and watch for a grassy landing with log steps. Do not pass the old stone bridge abutment on the right bank just downstream from the landing. **Turn around to avoid being swept over the open crest of the high dam!**

Portage - Follow the treadway of the portage trail as it traverses a steep slope past the dam and descends along the highly scenic falls to the river opposite the powerhouse. The gradient and the quarter-mile length of the trail make this a rigorous portage.

The Passumpsic plunges about 62 feet over the Great Falls to provide ample water power, but on a difficult hydraulic setting. Only the pulp mill belonging to Charles T. and Herbert A. Wilder existed here prior to the hydroelectric station, and it was not built until 1876-77. Set on a high brick foundation on the west flank of the falls, the sturdy clapboarded building has survived the subsequent floods. The shift to hydroelectric generation came in 1895-96, when the Lyndonville Electric Dept. acquired the inactive pulp mill and installed its first generating equipment in place of the hydromechanical wheels. In 1915, the present concrete powerhouse with large round-arched windows was constructed next to the mill. In 1928, the curved concrete dam and contiguous power canal replaced the dam destroyed by the 1927 flood.

PHOTO 4 **WILDER PULP MILL WITH ELECTRIC LIGHT STATION AT GREAT FALLS, C. 1900**
(COURTESY OF HUGH H. HENRY)

Beyond the rapids at the foot of the falls, islands divide the channel before the Passumpsic reaches the town boundary between Lyndon and St. Johnsbury. Note the cut banks and river bed holding voluminous quantities of sand, the result of glacial deposits where the river winds along the narrow valley.

The river meanders again before reaching the usually calm water and quiet woods in the cool glen above the dam at the Pierce Mills Hydroelectric Station. Watch for the low concrete abutments of a former road bridge that warn of the dam around a curve to the right.

During the latter 19th century, the falls provided hydromechanical power for the Valley Falls Mills, established by Abel A. Pierce in 1864 and continued by his sons, Freeman A. and Josiah W. The mills produced air-dried strawboard (cardboard) and lumber. The subsequent Pierce Mills Hydroelectric Station is the first of five generating stations operated by Green Mountain Power Corporation along the river.

The Twin State Gas and Electric Co. redeveloped this hydraulic setting in 1918 as its No. 0 (the firm had already designated the earlier St. Johnsbury Center station downstream as No. 1 in its series). Except for the 1925 concrete dam, this station was largely destroyed by the 1927 flood. The present Georgian Revival style, brick powerhouse was constructed the following year.

Warning (Mile 15.8): All boaters must portage around the Pierce Mills dam! (See the detailed inset map.)

Portage - Approach the left bank to find the canoe take-out sign about 150 yards before the dam. The 200-yard portage trail leads through the woods to a driveway that parallels the steel penstock and passes tent sites and picnic tables available for overnight camping. After turning toward the powerhouse, the trail descends a grassy slope to the river just downstream.

FIGURE 9 PIERCE MILLS DAM PORTAGE ROUTE

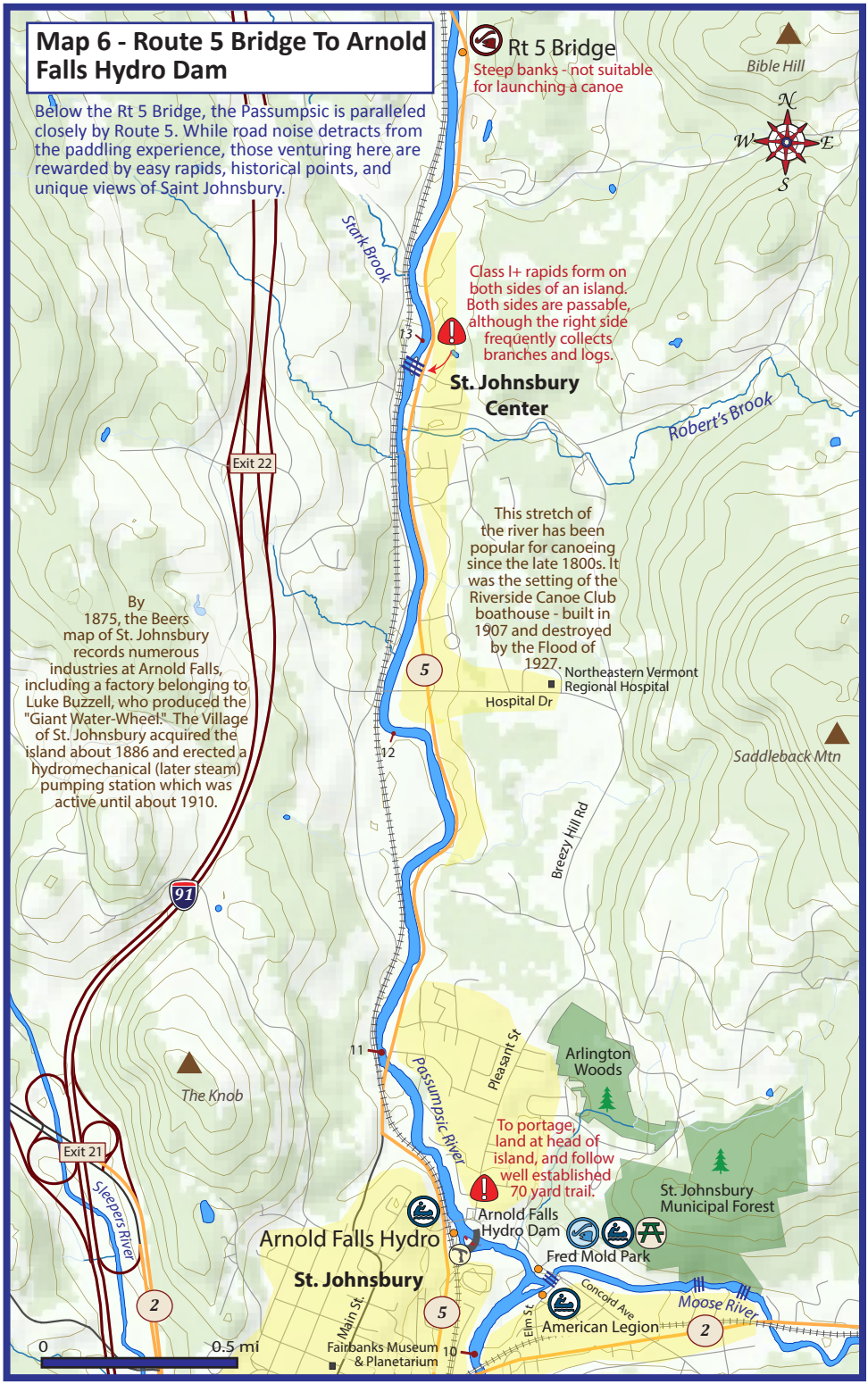
PHOTO 5 CLASS III LEDGES BELOW PIERCE ROAD BRIDGE
(Courtesy of Frank Chaloux)

Below the dam, the Passumpsic gains a little speed as it flows past a factory and cornfields. Route 5 returns to the right bank, where the river takes an abrupt S-curve and passes under the Pierce Road bridge.

Just after the next sharp left bend, the river winds away from Route 5 into a series of rocky hairpin bends followed by a set of three-foot ledges (about Mile 14.2) that are the most challenging on the river.

Warning (Mile 14.2): These stepped ledges are not navigable under usual water levels during most of the paddling season, and become Class III whitewater demanding technical skill at other times. Boaters should portage around these rapids!

Portage - Approach carefully along the left bank and find the small, sandy landing just upstream from the rocky rapids. Climb the steep bank and follow an old path about 85 yards through the woods to put in at the broad pool below the rapids. A possible alternative under suitable water levels involves lining the boat among the rocks along the left bank, being careful on the rough and slippery footing.


Map 6 - Route 5 Bridge To Arnold Falls Hydro Dam
Below the Rt 5 Bridge, the Passumpsic is paralleled closely by Route 5. While road noise detracts from the paddling experience, those venturing here are rewarded by easy rapids, historical points, and unique views of Saint Johnsbury.
Rt 5 Bridge
Steep banks - not suitable for launching a canoe
Bible Hill
N
W
E
S
Stark Brook
Class I+ rapids form on both sides of an island. Both sides are passable, although the right side frequently collects branches and logs.
13
St. Johnsbury Center
Robert's Brook
Exit 22
This stretch of the river has been popular for canoeing since the late 1800s. It was the setting of the Riverside Canoe Club boathouse - built in 1907 and destroyed by the Flood of 1927.
By 1875, the Beers map of St. Johnsbury records numerous industries at Arnold Falls, including a factory belonging to Luke Buzzell, who produced the "Giant Water-Wheel." The Village of St. Johnsbury acquired the island about 1886 and erected a hydromechanical (later steam) pumping station which was active until about 1910.
5
Northeastern Vermont Regional Hospital
Hospital Dr
12
Saddleback Mtn
Breezy Hill Rd
91
11
Pleasant St
Passumpsic River
Arlington Woods
The Knob
To portage, land at head of island, and follow well established 70 yard trail.
Exit 21
Sleepers River
St. Johnsbury Municipal Forest
Arnold Falls Hydro
Arnold Falls Hydro Dam
Fred Mold Park
St. Johnsbury
Concord Ave
Moose River
Main St
Elm St
American Legion
2
5
2
0
0.5 mi
Fairbanks Museum & Planetarium
10

MAP 6 – ROUTE 5 BRIDGE TO ARNOLD FALLS HYDRO DAM

A quarter-mile downstream from the ledges, Route 5 crosses the Passumpsic diagonally on a multi-span bridge with piers in the river that require caution. Then the railroad returns to occupy the right bank. A relatively straight stretch takes the river between the constraints of the Route 5 embankment on the left and railroad on the right.

Stark Brook joins the Passumpsic on the right after flowing diagonally down the pastured hillside. The historic farm buildings and agricultural land on the west side of the river contrast sharply with the commercial strip and shopping mall on the opposite side. A series of historic buildings along the left bank mark the village of St. Johnsbury Center. The village extends linearly about one-half mile along the east side of the river. The hilly west side discouraged development, even though the village's railroad station (named Centervale to distinguish it from St. Johnsbury) was situated there.

Caution (Mile 12.95): The buildings warn of the next rapids on either side of a rocky island. Under most water levels, both rocky channels are navigable with care although the right side tends to collect driftwood that impedes passage.

Below the island, the shallow river's sandy bottom is clearly visible. Robert's Brook enters on the left within the village, followed closely by the Depot Hill Road metal-truss bridge. About three-quarters of a mile farther, a recent road bridge crosses the river as it continues constricted between Route 5 on the left bank and the railroad on the right.

The island marks the site of a log-crib dam prior to its destruction by the 1927 flood. During the latter 19th century, a hydromechanically powered grist mill existed here at the east end of the dam. The partners Prentice L. Pierce and Charles D. Jones owned the mill in 1887, dealing in many kinds of flour, grain, and feed. Then about 1902, the St. Johnsbury Electric Light and Power Co. developed a hydroelectric station by installing generating equipment in the mill. After 1913, it became No. 1 in the series of stations belonging to the Twin State Gas and Electric Co. Only part of the mill's concrete foundation now survives.

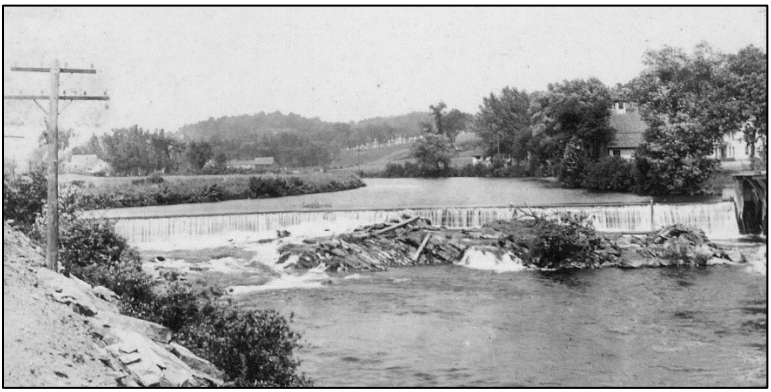


PHOTO 6 DAM AT TWIN STATE STATION NO. 1, ST. JOHNSBURY CENTER, C. 1920
(Courtesy of Hugh H. Henry)

The valley bottom funnels into the approach to St. Johnsbury Village. The river curves to the left just before the diagonal Route 5 bridge. The narrow passage under the bridge, combined with a faster current, makes this a little tricky in higher water. Buildings line both sides of the river along the half-mile between the Route 5 and Concord Avenue bridges. The latter bridge warns of the approach to the Arnold Falls Hydroelectric Station dams. The river splits into two channels while curving to the left around a rocky island, and two concrete dams flank the island.

These falls bear the surname of Dr. Jonathan Arnold, an early settler and entrepreneur who constructed the first sawmill here in 1787 and a gristmill the next year. Later the falls vicinity became known as Paddock Village, after the energetic Huxham Paddock. In 1828, he started a blast furnace and iron works, and produced stoves, turning lathes and other machinery. (Iron slag from the works appears even now in the river bed.)

Warning (Mile 10.5): All boaters must portage around the Arnold Falls dams! (See detailed inset map.)

Portage - Some boaters end their trip here by taking out on the right bank just beyond the bridge. If you choose to continue, land at the head of the island and carry about 70 yards down its slope past the concrete foundations. Put in below the dams at the downstream tip of the island.

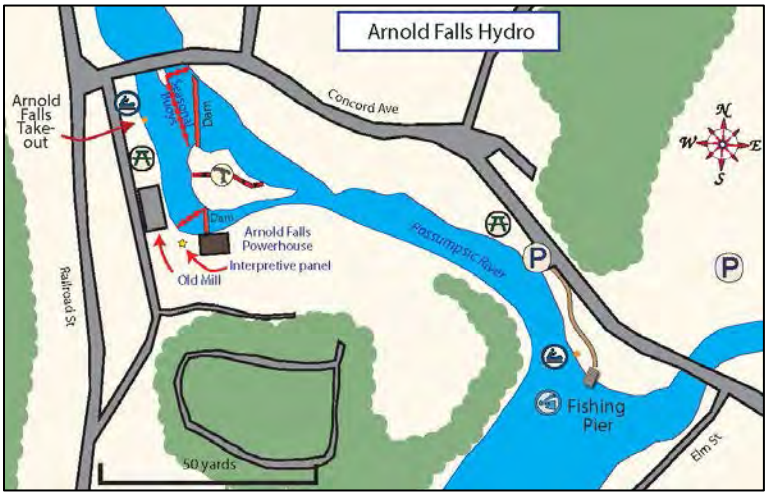


FIGURE 11 ARNOLD FALLS DAM PORTAGE ROUTE

In about 1886, the Village of St. Johnsbury erected a hydromechanical (later steam) pumping station for supplying both domestic uses and fire hydrants. Active until about 1910, the brick pumphouse and tall brick smokestacks were demolished after 1930.

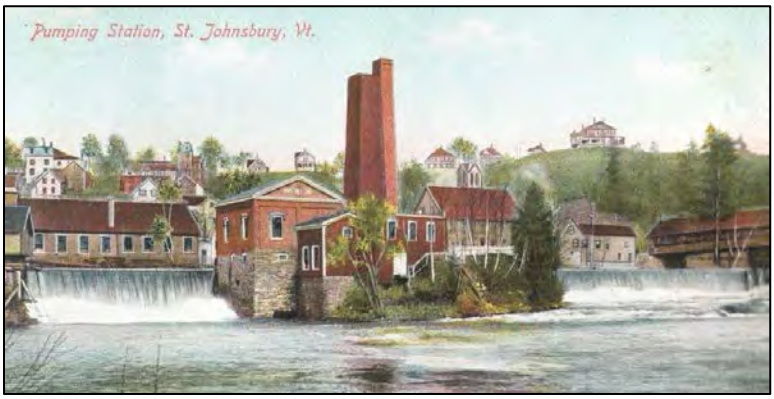


PHOTO 7 ST. JOHNSBURY MUNICIPAL WATER PUMPING STATION AT ARNOLD FALLS, C. 1900
(Courtesy of St. Johnsbury History and Heritage Center)

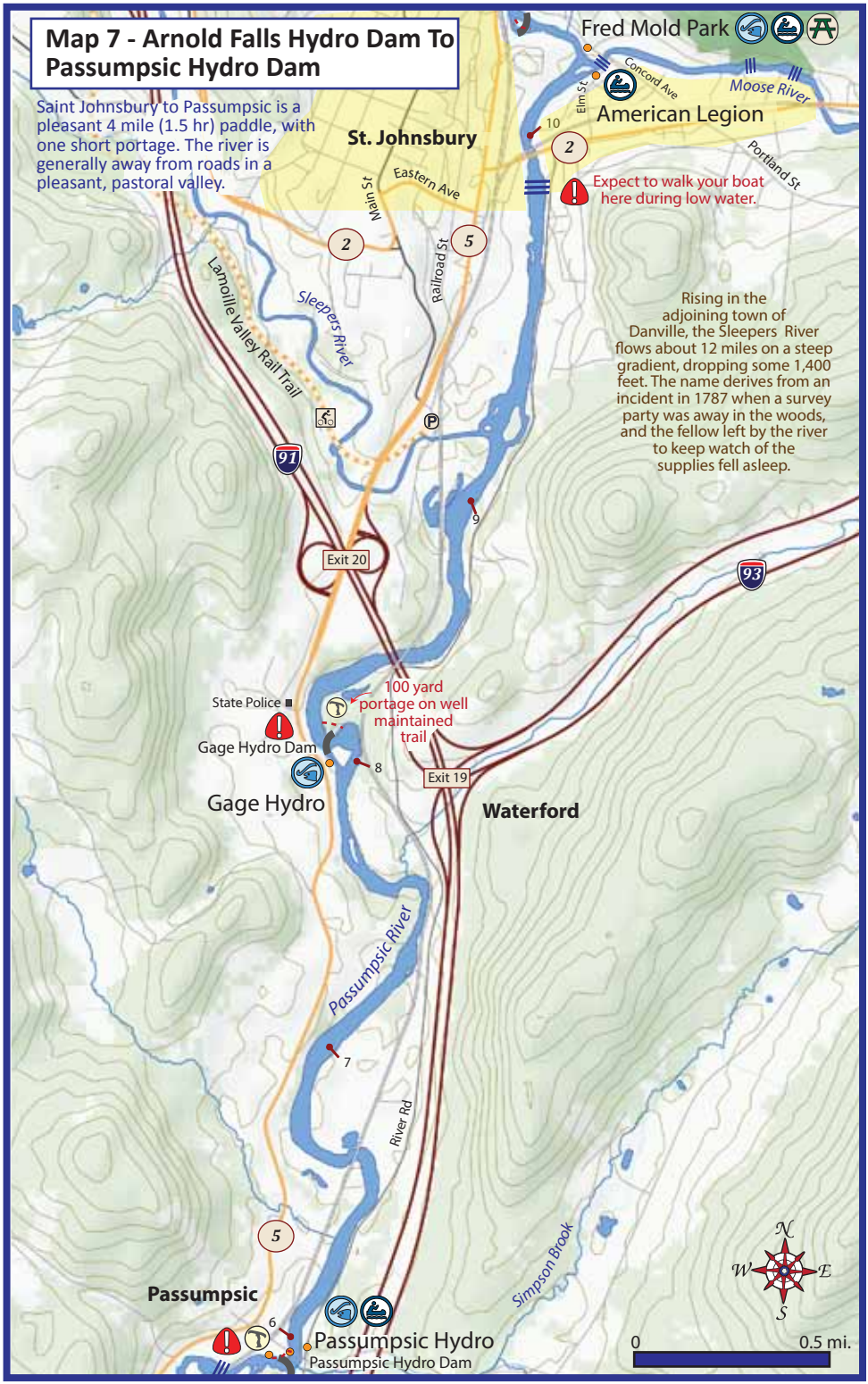
Hydroelectric activity began about 1910, when the Hooker Manufacturing Co. (successor to the Paddock works) installed generating equipment for internal use. In 1926, the Twin State Gas and Electric Co. purchased this station. The 1927 flood caused extensive damage, and the Georgian Revival style, brick powerhouse was built the next year. The Central Vermont Public Service Corp constructed the present concrete dams to replace deteriorated log-crib counterparts.

The Passumpsic curves to the right, and the Moose River enters on the left over a small falls at its mouth. A perpetual eddy just upstream of the mouth should not present any problems for the observant paddler.

American Legion Public Access (Mile 10.3): The American Legion access is located on southern bank of the river where the Moose River joins the Passumpsic River.

PHOTO 8 FRED MOLD PARK, ST. JOHNSBURY
(Courtesy of Frank Chaloux)

Fred Mold Park Public Access (Mile 10.3): A short distance below Arnold Falls, Fred Mold Park occupies the left bank near the Moose River confluence. The park, named for a prominent local naturalist, provides a convenient place to start a trip down the Passumpsic. Parking is available in a small lot and on nearby streets. The put-in is down a short grassy incline to the river.


Map 7 - Arnold Falls Hydro Dam To Passumpsic Hydro Dam
Saint Johnsbury to Passumpsic is a pleasant 4 mile (1.5 hr) paddle, with one short portage. The river is generally away from roads in a pleasant, pastoral valley.
St. Johnsbury
Fred Mold Park
Concord Ave
Elm St
Moose River
American Legion
Portland St
Main St
Eastern Ave
Railroad St
Lamoille Valley Rail Trail
Sleepers River
Expect to walk your boat here during low water.
Rising in the adjoining town of Danville, the Sleepers River flows about 12 miles on a steep gradient, dropping some 1,400 feet. The name derives from an incident in 1787 when a survey party was away in the woods, and the fellow left by the river to keep watch of the supplies fell asleep.
91
93
Exit 20
Exit 19
State Police
100 yard portage on well maintained trail
Gage Hydro Dam
Gage Hydro
Waterford
Passumpsic River
River Rd
Simpson Brook
Passumpsic
Passumpsic Hydro
Passumpsic Hydro Dam
N
W
E
S
0
0.5 mi.

MAP 7 – ARNOLD FALLS HYDRO DAM TO PASSUMPSIC HYDRO DAM

Below the confluence with the Moose River, the wide channel of the Passumpsic becomes rocky at lower water levels. Another pair of contrasting bridges follows with a through-truss railroad bridge adjacent to the high-level Portland Street bridge straddling a lower road bridge.

Caution: Just downstream of the bridges, keep to the left to avoid first a sandbar and then a ragged remnant of log cribbing that projects from the right bank.

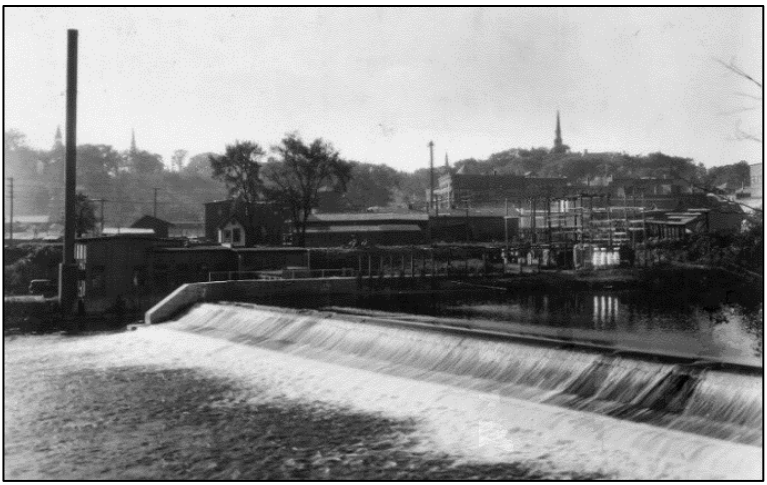


PHOTO 9 DAM AT TWIN STATE STATION NO. 2, BAY STREET, C. 1920
(Courtesy of Green Mountain Power)

The log cribbing marks the site of the Bay Street Hydroelectric Station dam that operated between 1912 and 1944. Unique among the stations along the river, the Bay Street Station produced electricity using both hydroelectric and thermal (steam) generating equipment. The concrete foundations of the former brick powerhouse are visible on the right bank.

The next half-mile down the river leads through a little quickwater to a large island opposite the mouth of the Sleepers River, entering on the right next to the St. Johnsbury sewage treatment plant.

The Passumpsic leaves the downstream outskirts of St. Johnsbury with River Road following the left bank. About a half-mile below the Sleepers confluence, a twin-span railroad bridge seems overwhelmed by the much higher twin bridges of Interstate 91. Then the river curves to the left and into the slack water behind the dam at the Gage Hydroelectric Station (Mile 8.1).

Warning (Mile 8.1): All boaters must portage around the Gage dam!

Portage - The portage landing is on the left bank, about 100 yards upstream from the dam. Watch for the canoe take-out sign. Follow the trail about 100 yards through the woods and then down the bank to a sandy beach below the dam.

The river swirls through a large eddy pool below the dam, and then curves to right and passes the tailrace channel from the powerhouse. Churning water indicates that one or both of the turbine-generator units are operating.

A short distance below the Gage powerhouse, the town boundary between St. Johnsbury and Waterford crosses the river. Then the Passumpsic passes through an S-curve and enters a short, narrow gorge with the railroad on the left bank.

The massive stone and concrete foundations next to the Gage dam represent late 1800s industrial development. John Belknap built a log-crib dam here for his edge-tool and water-wheel shop.

About 1891, the St. Johnsbury Electric Light and Power Co. installed the first generating equipment, probably in the Belknap shop. This became the Twin State Gas and Electric Co.'s Station No. 3 after 1913, and that utility expanded the electrical output by constructing the present concrete powerhouse on the opposite side of the river in 1919-20. The 1927 flood destroyed the log-crib dam, and the present concrete dam was built in 1928-29.

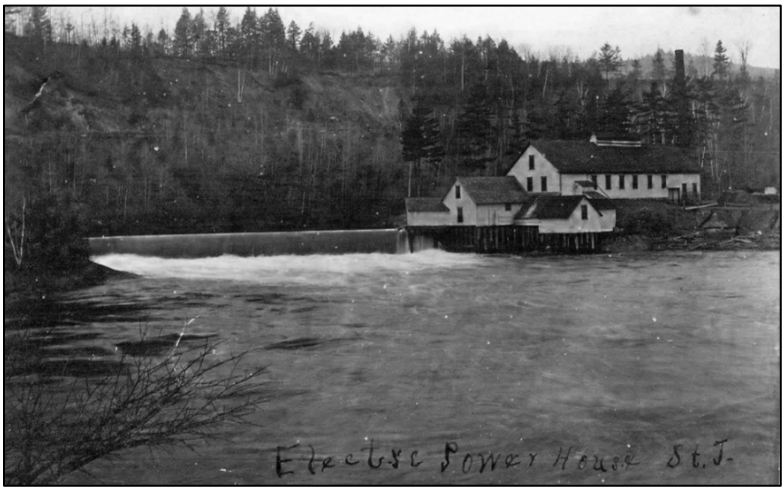


PHOTO 10 BELKNAP SHOP WITH ST. JOHNSBURY ELECTRIC LIGHT GENERATING STATION, C.1900
(Courtesy of Hugh H. Henry)

The river next opens out into cornfields and farmland. After a bend to the left, another railroad bridge marks the approach to Passumpsic Village in the town of Barnet and the impounded water behind the Passumpsic Hydroelectric Station dam.

Warning (Mile 5.95): All boaters continuing down-river must portage around the Passumpsic dam! (See the detailed map below.)

Portage - The first take-out above the dam is on the left bank, just before the Bridge Street steel-truss bridge, where the Passumpsic Valley Land Trust maintains a public fishing access. A small parking area and a picnic table are available here. Paddle under the bridge and keep close to the right bank to find the second take-out on the mowed area in the powerhouse yard. A picnic table provides a good spot for lunch. Continue the portage through the powerhouse yard by following the marked route of the 100-yard trail over the power canal bridge to the rocky "island." Turn right along the canal, and descend carefully the steep, often slippery rocks to launch in the tailrace below the powerhouse.

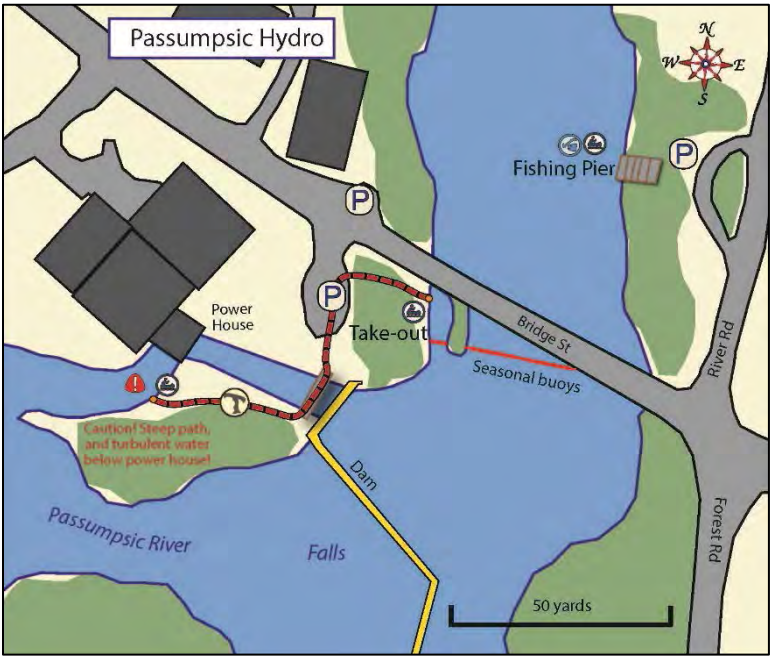


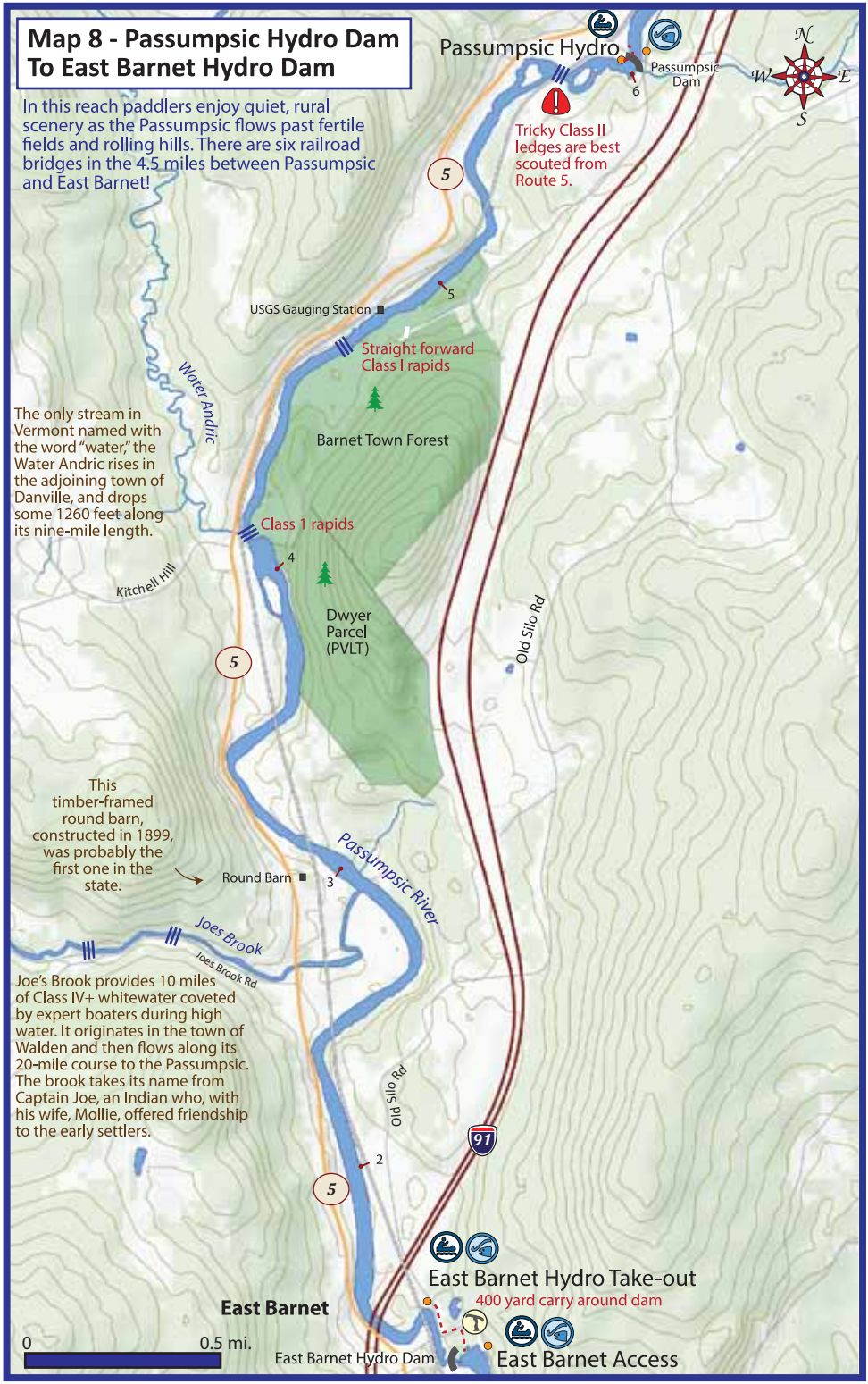
FIGURE 13 PASSUMPSIC DAM PORTAGE ROUTE

Caution: Before continuing, boaters should scout the tricky rapids under the railroad bridge visible downstream from the powerhouse! The safest way to scout these rapids is to walk westward along Bridge Street to Route 5, and then turn south until you can clearly see the river under the bridge. Do not walk along the more direct but dangerous railroad track!

The water power has been used here by small-scale industrial enterprises since the first sawmill was built in 1789. The shift to hydroelectric generation came in 1904, when fire struck the mill(s), and the St. Johnsbury Electric Light and Power Co. acquired the water rights. After 1913, this became Station No. 4 of the Twin State Gas and Electric Co. The 1927 flood destroyed the original powerhouse. Constructed in 1929, the present Georgian Revival style, brick powerhouse adjoins the former Chase leatherboard mill.

Map 8 - Passumpsic Hydro Dam To East Barnet Hydro Dam

In this reach paddlers enjoy quiet, rural scenery as the Passumpsic flows past fertile fields and rolling hills. There are six railroad bridges in the 4.5 miles between Passumpsic and East Barnet!



MAP 8 – PASSUMPSIC HYDRO DAM TO EAST BARNET HYDRO DAM

Downstream from the Passumpsic powerhouse, paddle through the foot of the rapids below the dam and past an island. The river curves abruptly to the right at the lower end of the island, and heads for the railroad bridge; taking the left channel around the island gives a longer direct sightline to prepare for the challenging conditions under the bridge.

Caution: The river spills over ledges into rapids under the railroad bridge! The difficulty of this passage varies with the water level. If the rapids look too risky and the water level permits, land on the left side of the ledges, line your boat past the rapids, and board in the pool below the bridge.

PHOTO 11 RAPIDS BELOW PASSUMPSIC STATION
(Courtesy of Frank Chaloux)

Beyond the rapids, enjoy the quiet, rural scenery as the Passumpsic flows over a sandy bottom. The river winds back and forth across the narrow valley between rolling hills. The railroad follows the right bank after the second bridge below the Passumpsic dam. Easy rapids follow a short distance downstream. The river flows past the Barnet Town Forest along the left side.

In another half-mile, after a USGS suspended cableway used to measure river velocity, the Water Andric tributary enters on the right. Watch for the pretty waterfall framed by the concrete arch of the railroad bridge. Immediately below the confluence, short rapids in the Passumpsic give the boater a brief but intense ride. The eddy pool on the left provides a respite before continuing to the left around the large island just downstream.

From here to East Barnet, the railroad follows nearly a straight line across the floodplain while the river twists and turns under four bridges. The river bumps against a steep-sided hill on the west side of the valley after the first bridge. Then the clear and cold water of Joes Brook joins the Passumpsic on the right just downstream from the second bridge.

Below Joes Brook, the Passumpsic flows through a narrow valley of rich soils deposited by the river during thousands of years. Family gardens and fields of corn and hay line the banks. The buildings of East Barnet village appear on the right after the river passes under the twin highway bridges. Then, beyond a curve to the left, a railroad bridge marks the approach to the dam at East Barnet Hydroelectric Station. Boaters should not paddle beyond the steel-truss highway bridge just downstream, to avoid being swept over the open crest of the dam.

Warning (Mile 1.3): All boaters must portage around the East Barnet dam! (See the detailed map below.)

Portage - Take out on the left bank just after the railroad bridge. Turn right on the gravel road and continue along the river to the paved road at the east end of the bridge. Turn left and follow this road downhill for about 400 yards. Then find the old mill driveway on the right that leads through young woods to a sand beach at the foot of the falls. A small parking area a little farther along the road provides a put-in for boaters who choose to start a trip down to the Connecticut River.

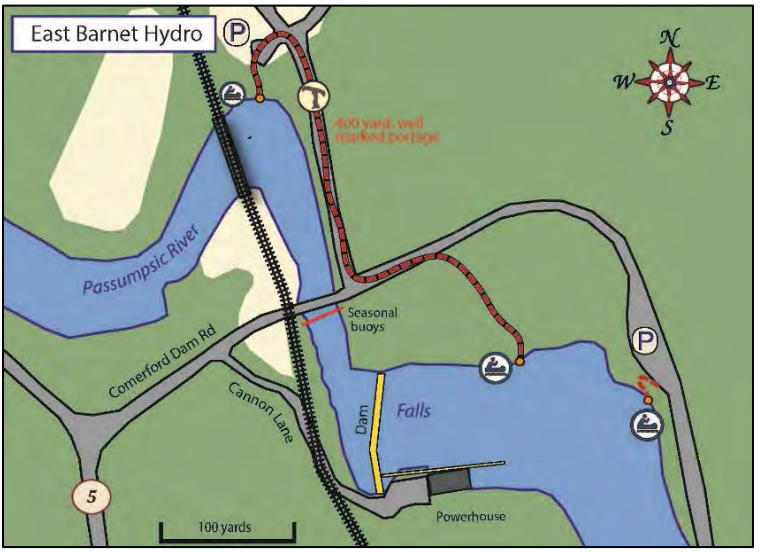


FIGURE 15 EAST BARNET DAM PORTAGE ROUTE

PHOTO 12 EAST BARNET ACCESS
(Courtesy of Frank Chaloux)

The falls here have been used for water power since the late 1700s. John McLaren from Scotland built the first sawmill, and the emerging hamlet was known by his surname until about 1850. Then Amos B. Norris started a bobbin factory, and by 1875, the Beers atlas identifies the place as Norrisville, showing the factory and mill on the east bank of the river. In 1882, after the Norris firm failed, the village name was changed to East Barnet.

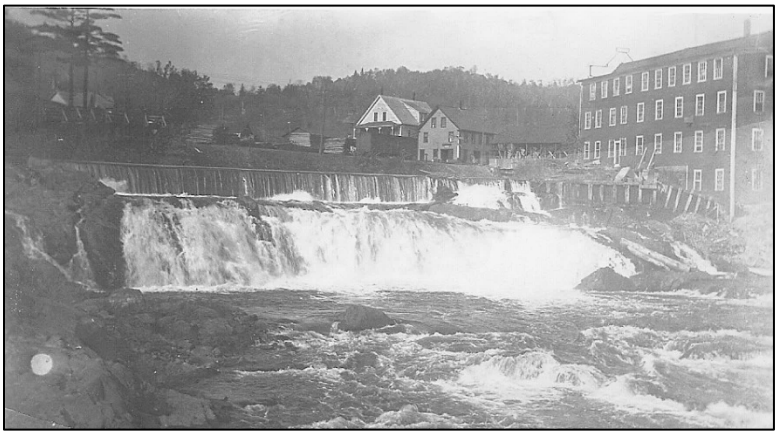
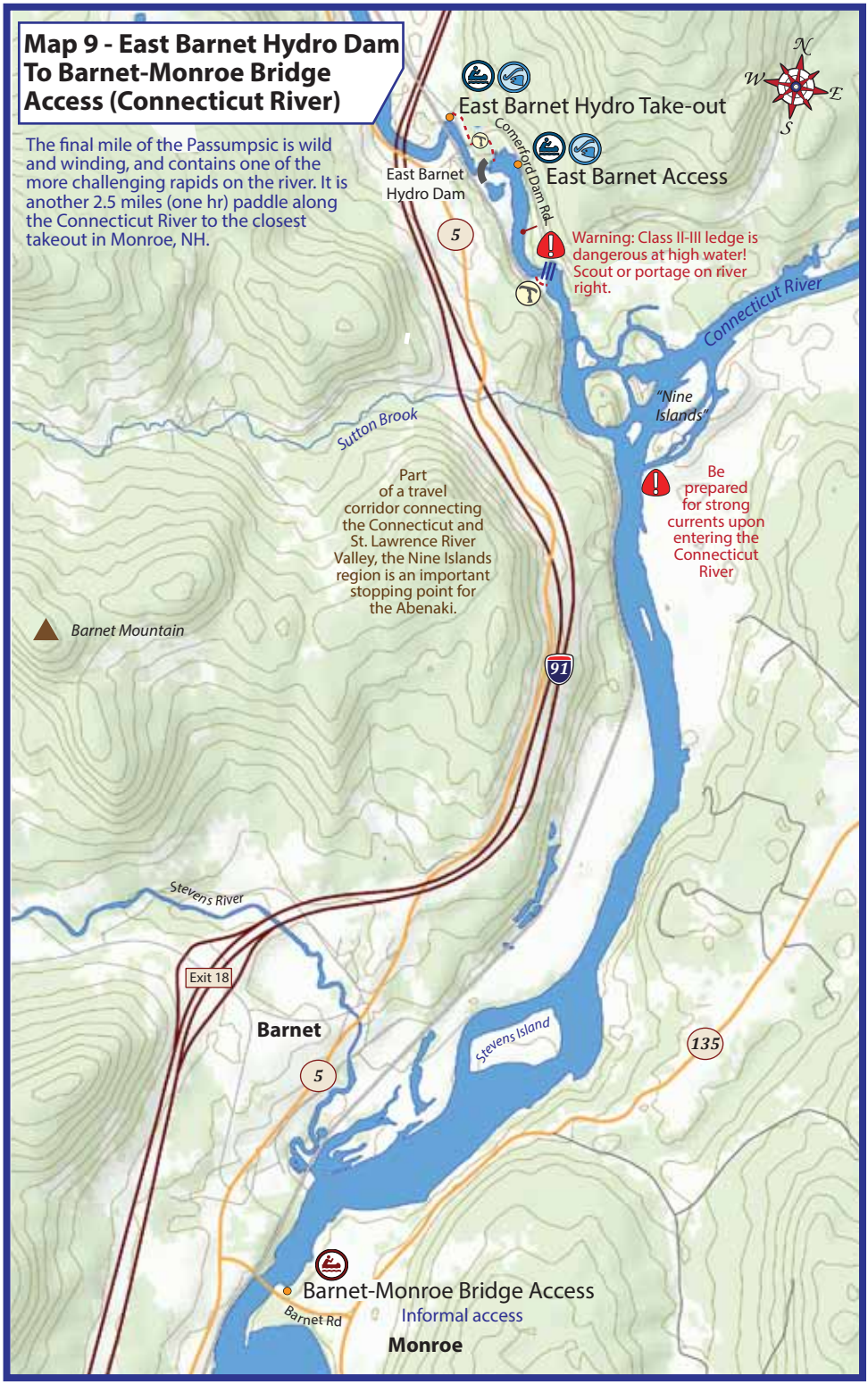


PHOTO 13 FALLS AT EAST BARNET WITH ROY BROTHERS CROQUET FACTORY ON RIGHT, C. 1910
(Courtesy of Northeast Kingdom Genealogy)

Subsequently John G. and Elmer E. Roy enlarged the Norris factory to four stories, and by the 1910s, were the largest makers of croquet sets in the U. S. along with a variety of other wood products, such as cow stanchions. The Roys installed electrical generating equipment both for internal use and lighting the village. Then the factory burned in 1925, and now, only the concrete foundation marks the site although overgrown with trees.

On the west side of the falls, a wood pulp mill preceded the development of hydroelectric generation. The Central Vermont Public Service Corp. constructed the present concrete dam and powerhouse in 1983-84, ranking this 1.8 megawatt station as the largest and most modern representative of hydroelectric technology on the river.


Map 9 - East Barnet Hydro Dam To Barnet-Monroe Bridge Access (Connecticut River)
The final mile of the Passumpsic is wild and winding, and contains one of the more challenging rapids on the river. It is another 2.5 miles (one hr) paddle along the Connecticut River to the closest takeout in Monroe, NH.
East Barnet Hydro Take-out
Comerford Dam Rd
East Barnet Access
East Barnet Hydro Dam
5
Warning: Class II-III ledge is dangerous at high water! Scout or portage on river right.
Connecticut River
"Nine Islands"
Sutton Brook
Be prepared for strong currents upon entering the Connecticut River
Part of a travel corridor connecting the Connecticut and St. Lawrence River Valley, the Nine Islands region is an important stopping point for the Abenaki.
Barnet Mountain
91
Stevens River
Exit 18
Barnet
5
Stevens Island
135
Barnet-Monroe Bridge Access
Informal access
Barnet Rd
Monroe
N
W
E
S

MAP 9 – EAST BARNET HYDRO DAM TO BARNET-MONROE BRIDGE ACCESS (CONNECTICUT RIVER)

Caution: Before launching at the East Barnet Access, boaters should scout the challenging rapids a quarter-mile downstream! Walk along the paved road (Comerford Dam Road) until you can look down the steep bank to a rocky hairpin turn in the river. The difficulty of navigating through it depends on the water level; keep the pattern of the narrow rapids and flanking rocks in mind for the approach by water.

Leaving the large eddy pool below the East Barnet falls, the river swirls to the right. A quarter-mile beyond, a curve to the left marks the approach to the hairpin turn where boaters have been involved in fatal accidents. Scout or portage this rapid from the exposed ledge on river right.

PHOTO 14 RAPIDS DOWNSTREAM OF EAST BARNET DAM
(Courtesy of Frank Chaloux)

Warning (Mile 0.85): This hairpin turn requires precise maneuvering in the narrow rapids framed by rocks along both sides! A finger of ragged rocks projects from the right bank, and forces the channel first to turn abruptly left into a chute with often strong rapids and then curve abruptly back to the right.

Keep to the right and backpaddle through the entire turn in order to avoid colliding with the rock wall of the left bank. However, if you stay too close to the rocks on the right, the current may carry you onto them and overturn your boat. This passage becomes dangerous at medium-to-high water; under such conditions, approach carefully along the right bank to land at the base of the rock finger and lift across it.

After straightening its course, the river passes between the concrete abutments of a former railroad bridge. Just downstream from the railroad bridge abutments, the state boundary between Vermont and New Hampshire crosses the river. You will paddle in the town of Monroe, New Hampshire for the rest of the trip.

The Passumpsic then approaches its confluence with the much larger Connecticut River. The river splits to meander among the Nine Islands that form its delta. Marked by the railroad following its right bank, the main channel passes to the right of Round Island, a natural treasure of plants, trees, and wildlife. Sutton Brook enters the main channel on the right after cascading down the lower slope of Barnet Mountain.

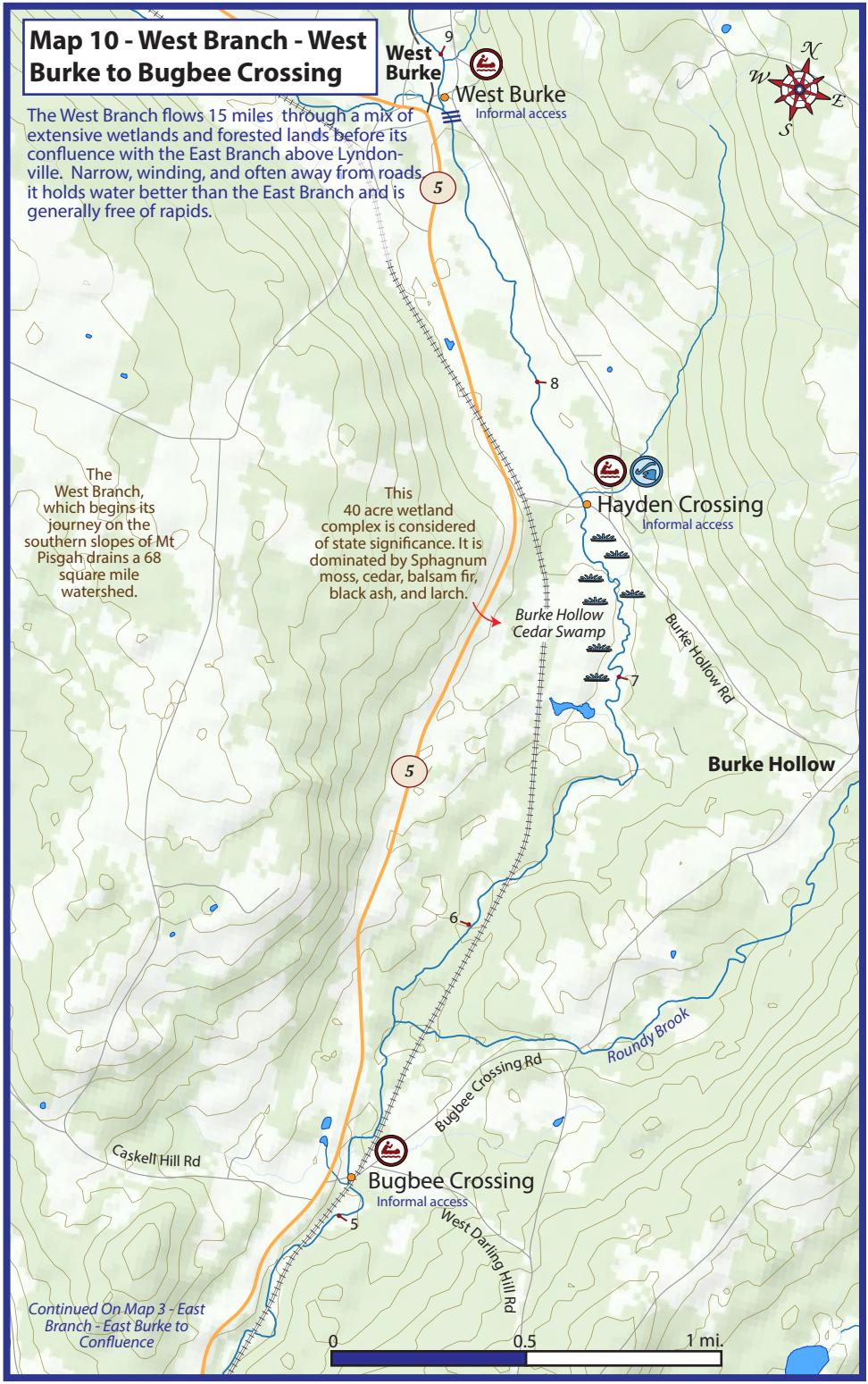
Warning (Mile 0.0): Unpredictable release of water from Comerford Dam a mile upstream in the Connecticut River may generate a strong current and cause the water level to fluctuate up to six feet!

As you enter the larger Connecticut River, prepare for the push of current against the left side of your craft. Do not grab the sides of the boat to steady yourself; instead, lean slightly down-river and keep your paddle in the water to turn the boat with the current.

The nearest convenient place to conclude your Passumpsic trip comes about 2.5 miles farther down the Connecticut River. Opposite the large Stevens Island, you will observe Barnet village on the right side of the river. Then the Stevens River joins the Connecticut on the same side. The best take-out, however, is on the New Hampshire (left) side where the Connecticut narrows between high rocky banks before passing under the steel-arched highway bridge. Land near the edge of the open pasture at the foot of a paved driveway with a small parking area.

Map 10 - West Branch - West Burke to Bugbee Crossing

The West Branch flows 15 miles through a mix of extensive wetlands and forested lands before its confluence with the East Branch above Lyndonville. Narrow, winding, and often away from roads, it holds water better than the East Branch and is generally free of rapids.



MAP 10 – WEST BRANCH - WEST BURKE TO BUGBEE CROSSING

The West Branch Passumpsic River begins high on the eastern slopes on Mt. Pisgah (Mile 16.0) but soon collects the waters from Arcadia Brook and Newark Pond before settling into the low valley between Newark and the North Ridge of Sutton (not mapped).

The river parallels Route 5A, flowing more like a large creek in the valley bottom, largely inaccessible, until it descends into the Village of West Burke and joins with the Sutton River (Mile 8.8), its parallel course approaching from the northwest.

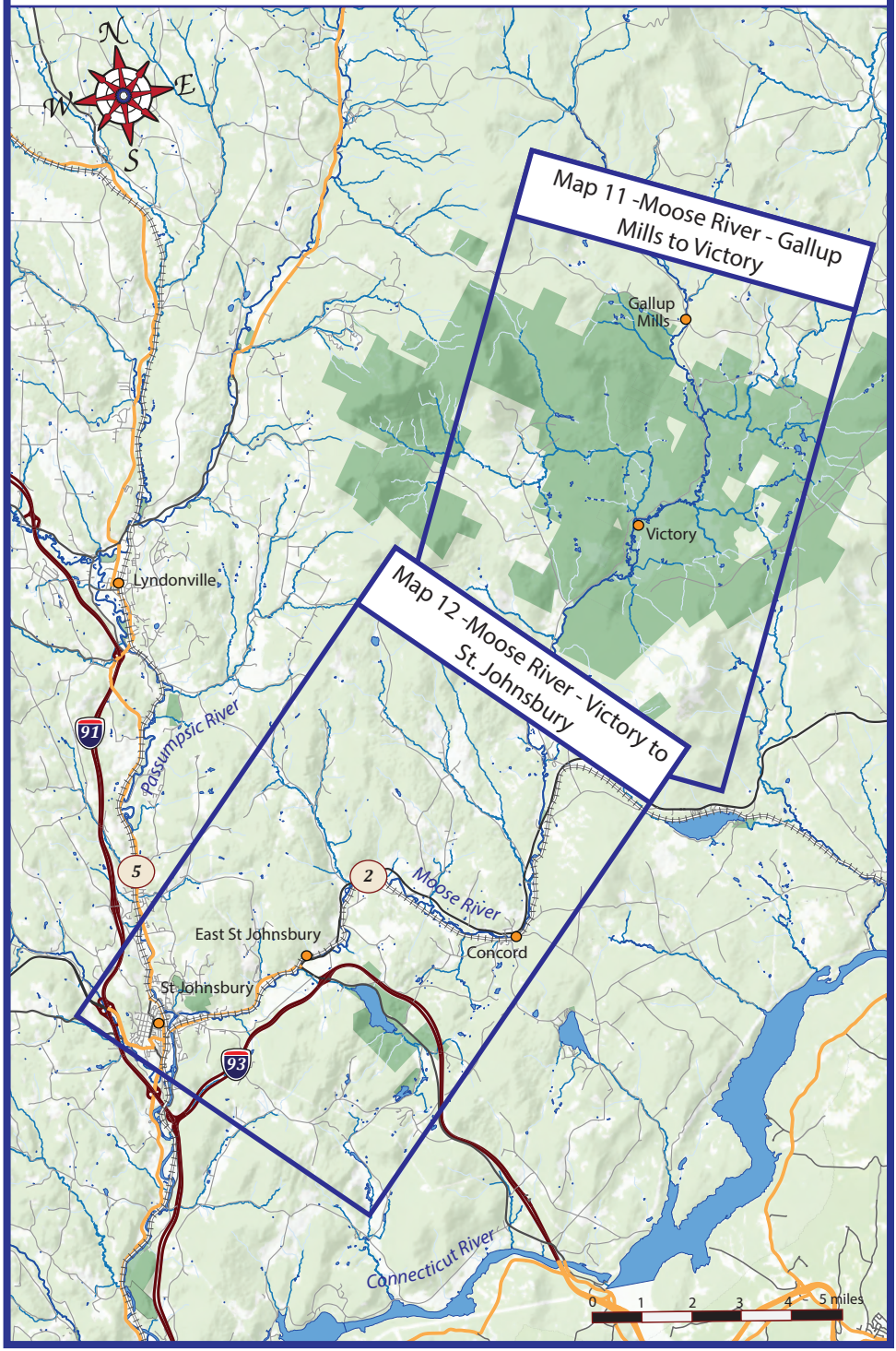
Below West Burke, the river, still narrow and relatively shallow, passes beneath the bridge at Hayden's Crossing (Mile 7.7) and enters a large wetland complex. As it continues south, the river follows the eastern edge of a large glacial esker formed over 10,000 years ago. Be aware of the potential for downed trees and other natural obstacles in this remote section of river.

Approaching the bridge at Bugbee Crossing Road (Mile 5.2), Roundy Brook enters from the north. Here, the river descends under a narrow railroad overpass and follows close to the rail corridor. At the southern end of the esker, Calendar Brook enters on the right (Mile 3.1).

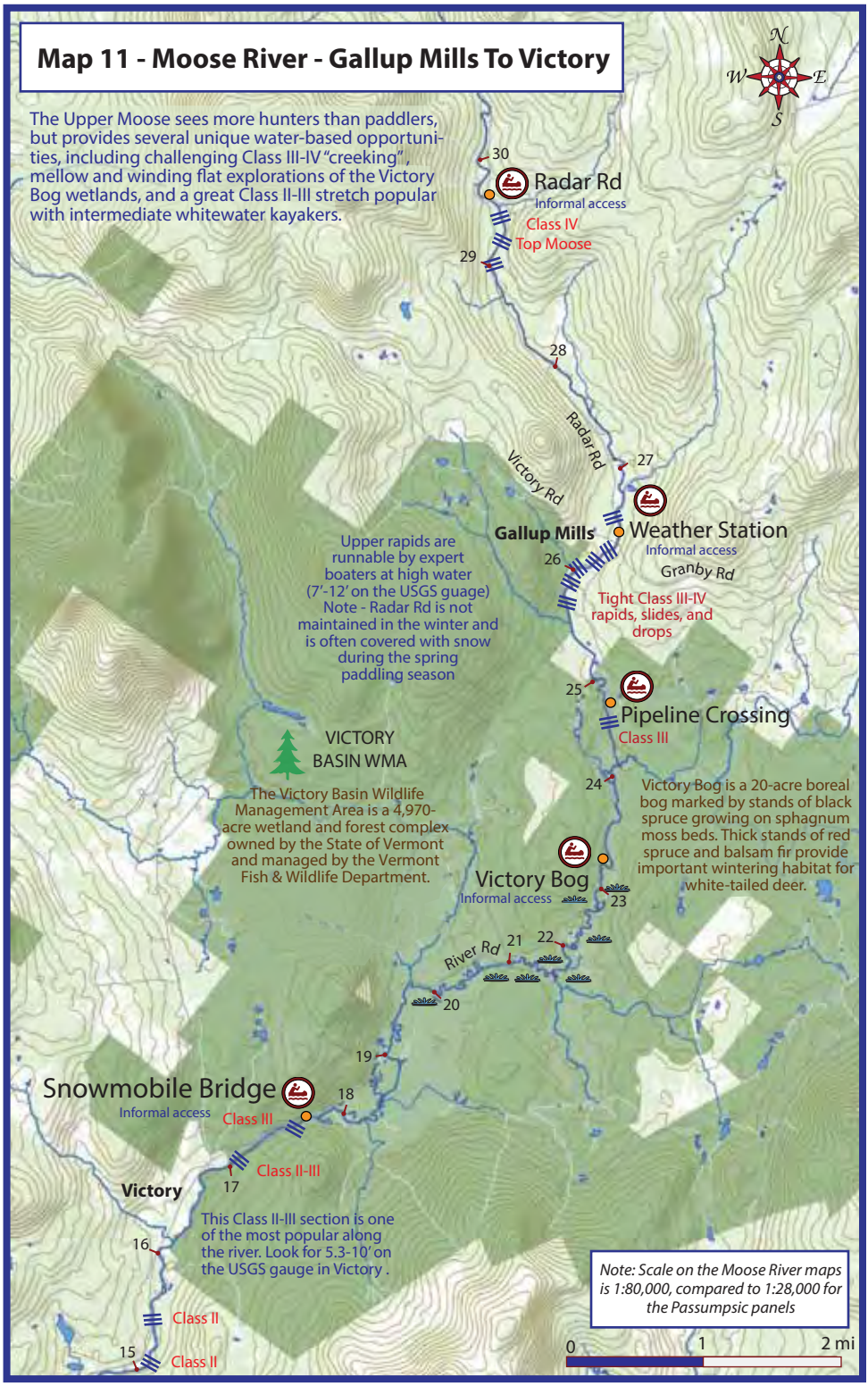
Paddlers can quickly access the West Branch by putting in on the Calendar Brook at the Route 5 bridge or by putting in at a bridge 1-mile upstream on Calendar Brook Road (see Map 3).

From here, the river continues to follow the railroad, bordered on the east by the Darling Ridge, and flows smoothly to the confluence with the East Branch (Mile 0.0) where the Passumpsic Valley Land Trust maintains a formal access.

Moose River Reference Map



Map 11 - Moose River - Gallup Mills To Victory



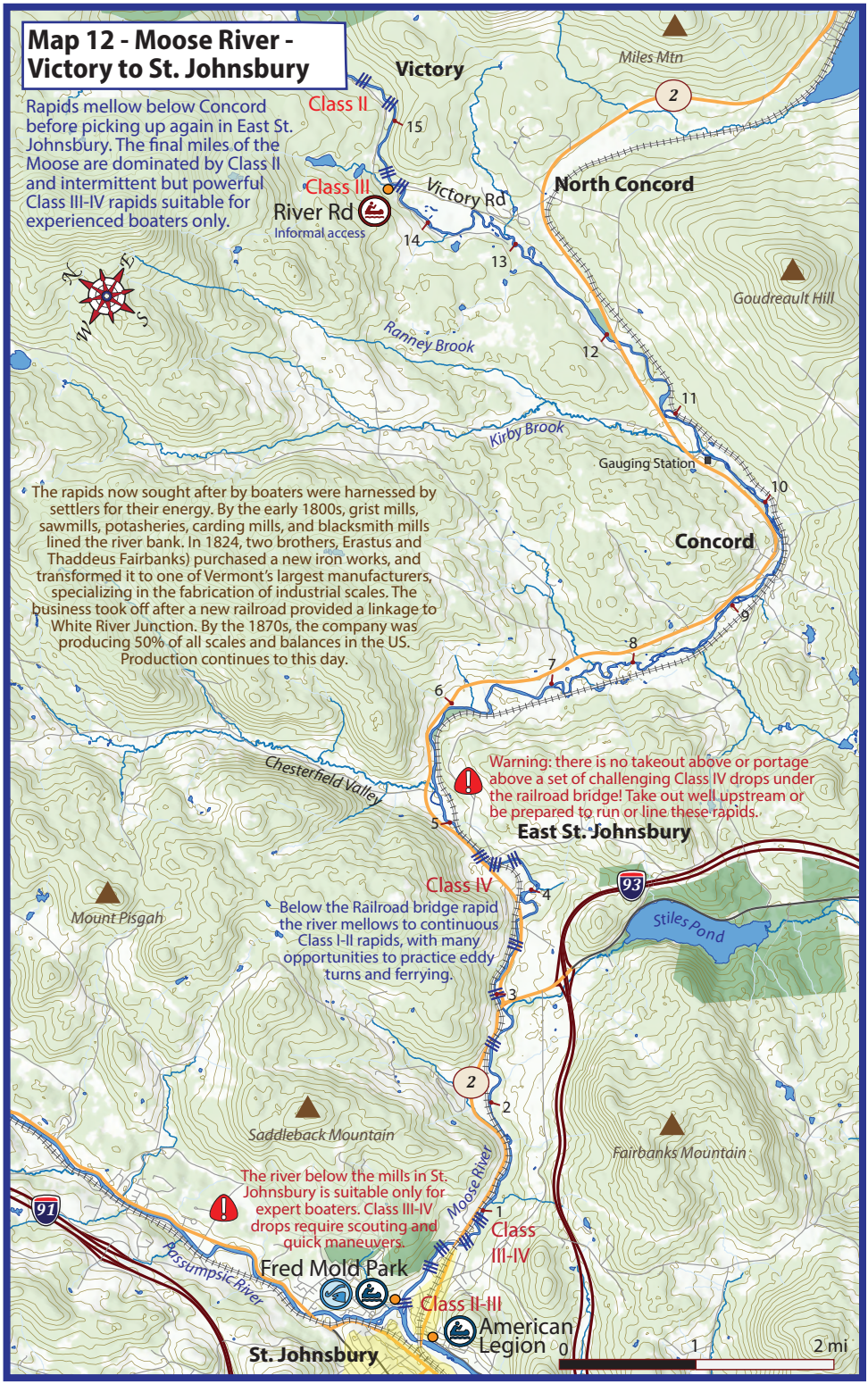
MAP 11 – MOOSE RIVER - GALLUP MILLS TO VICTORY

The Moose River is one of the major tributaries to the Passumpsic River, draining a large area of southern Essex County surrounding the Victory Basin, including the headwater streams on East, Cow, Tug, Miles, Kirby, Burke, Umpire, and East Haven mountains. Collectively, many of these streams feed into the Moose River in the Victory Basin and contribute to a unique natural area with dense lowland spruce-fir forests, extensive wetlands, and abundant wildlife. The Moose River lowlands were, at one time, the site of a thriving logging village with housing, mills, and a spur railroad. Today, much of the area is part of the Victory Basin Wildlife Management Area and Victory State Forest.

Access to the Moose River is informal and infrequent, with only a few designated entry points on public lands. Paddlers will find a wide variety of conditions on the Moose River, however, much of it should be tested only by skilled and experienced boaters. The northern headwaters provide Class IV creeking opportunities and the southern mainstem includes numerous ledge drops suitable only for expert paddlers. And while the lowlands of Victory Basin feature scenic and remote stretches of meandering waters, access is difficult and deadfall 'strainers' are frequent. Paddlers should exercise caution and carefully scout ahead for hazards.

The East and West branches of the Moose converge in the highlands north of the Victory basin and lead to a section containing a number of bedrock slides, small waterfalls, and a unique gorge. The character of the river is shallow and cobble lined between the bedrock rapids. Due to the narrow nature of the river, it is only recommended for boats shorter than 10' in length and should only be attempted by expert whitewater enthusiasts with creek boating experience. The gorge (Mile 3.1) is a unique Class IV rapid, with multiple Class III features stacked atop one another in a remote slate gorge once housing a dam for log drives.

Below the gorge, the river mellows to Class I to II until the bridge crossing at the Victory Road (Mile 26.4). Below that bridge comes a Class IV rapid, followed by a number of interesting Class II and III rapids through small bedrock gorges. This lower section can be run for another 2.5 miles to a takeout on River Road.


Map 12 - Moose River - Victory to St. Johnsbury
Rapids mellow below Concord before picking up again in East St. Johnsbury. The final miles of the Moose are dominated by Class II and intermittent but powerful Class III-IV rapids suitable for experienced boaters only.
Victory
Class II
15
Class III
River Rd
Informal access
14
Victory Rd
13
North Concord
Miles Mtn
2
Goudreault Hill
Ranney Brook
12
11
Kirby Brook
Gauging Station
10
The rapids now sought after by boaters were harnessed by settlers for their energy. By the early 1800s, grist mills, sawmills, potasheries, carding mills, and blacksmith mills lined the river bank. In 1824, two brothers, Erastus and Thaddeus Fairbanks) purchased a new iron works, and transformed it to one of Vermont's largest manufacturers, specializing in the fabrication of industrial scales. The business took off after a new railroad provided a linkage to White River Junction. By the 1870s, the company was producing 50% of all scales and balances in the US. Production continues to this day.
Concord
9
8
7
6
Chesterfield Valley
Warning: there is no takeout above or portage above a set of challenging Class IV drops under the railroad bridge! Take out well upstream or be prepared to run or line these rapids.
East St. Johnsbury
5
Class IV
Below the Railroad bridge rapid the river mellows to continuous Class I-II rapids, with many opportunities to practice eddy turns and ferrying.
4
93
Stiles Pond
Mount Pisgah
3
2
2
Saddleback Mountain
Fairbanks Mountain
The river below the mills in St. Johnsbury is suitable only for expert boaters. Class III-IV drops require scouting and quick maneuvers.
Moose River
1
Class III-IV
91
Passumpsic River
Fred Mold Park
Class II-III
American Legion
St. Johnsbury
0
1
2 mi

MAP 12 – MOOSE RIVER – VICTORY TO ST. JOHNSBURY

Once in the lowlands of the Victory Basin, the river slows considerably and, marked by its yellowed tanic water, winds its way through dense brush and softwood forests. A large parking area and trailhead at Damon's Crossing (Mile 19.8), where Bog Brook enters the Moose River, provides a reliable river access point.

Continuing downstream, a second river access enables paddlers to put-in/take-out where, leaving the confines of the basin, the river passes under a snowmobile bridge (Mile 17.7) and flows south through a classic reach of Class II to III whitewater that ends near the Village of North Concord. Paddlers should scout below the River Road bridge (Mile 14.5) before entering a challenging Class III whitewater section. Below here, the river eases and soon reaches an access near the US Route 2 bridge (Mile 11.9).

Below here, the river widens and moderates some through Concord (Mile 9.0) but features a dangerous ledge drop below the road and railroad bridges in the village of East St. Johnsbury (Mile 4.3).

Below the village, the river continues through steady Class I to II quickwater before entering a deep canyon-like gorge where the confines of natural terrain and early industrial stone embankments make access difficult and exits limited. Paddlers can take out above this section at a large gravel pull-off in the hamlet of Pettyco Junction (Mile 2.9), near the confluence with Stiles Brook.

Approaching St. Johnsbury, the river passes under a railroad bridge (Mile 0.6) and enters a section with several dangerous ledge drops interspersed with challenging Class III to IV whitewater that eventually deposits into the main stem Passumpsic River (Mile 0.0). This section should only be attempted by expert whitewater paddlers after carefully scouting ahead. Ledges may need to be lined or portaged around. The Moose River enters the Passumpsic River in St. Johnsbury below Arnold Falls at Fred Mold Park, a community-owned greenspace that offers excellent access for anglers and boaters.

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